

MANUFACTURERS' RECORD

A WEEKLY REVIEW OF THE IRON, STEEL, METAL & HARDWARE TRADES.

AND A MANUFACTURING AND TEXTILE PAPER, DEVOTED TO THE UPBUILDING OF SOUTHERN MANUFACTURES AND THE DEVELOPMENT OF THE MATERIAL RESOURCES OF THE SOUTH.

Vol. 7. No. 10.
WEEKLY.

BALTIMORE, APRIL 18, 1885

\$3.00 PER ANNUM.
SINGLE COPIES, 10 CENTS.

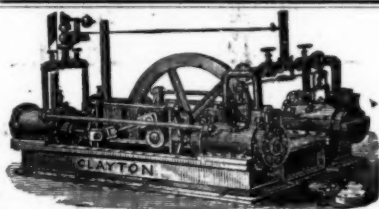
—MANUFACTURERS OF— **JAS. SMITH & CO.** —DEALERS IN—

CARD CLOTHING *Of Every Description.* **Manufacturers' & Mill Supplies**
COTTON and WOOLEN MACHINERY. *Office & Store, 137 Market St., Philadelphia.* *Of Every Description.*

INDIANAPOLIS TERRA COTTA CO. Manufacturers of All Kinds of

INDIANAPOLIS, IND. *Office, Fletcher & Sharpe's Block, Ind'olis.* **TERRA COTTA.**
Works, Brightwood, INDIANA. *Send for Estimates, Catalogues and Samples.*

WILLIAM F. STILZ, **G. L. DICKENSON,** **JOS. JOINER,**
President. *Secretary and Treasurer.* *Superintendent.*



Improved Duplex Air Compressor.

CLAYTON AIR COMPRESSORS

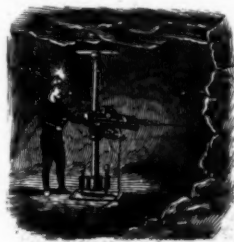
—Rock Drills, Mining Pumps and General Mining Machinery,
 For Catalogues, Estimates and Information, Address

CLAYTON STEAM PUMP WORKS, 45 and 47 York St., BROOKLYN, N. Y.

ELEVATORS

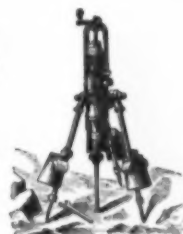
Send for Illustrated Circulars.

MORSE ELEVATOR WORKS.
MORSE, WILLIAMS & CO. Successors to CLEM & MORSE
 Manufacturers and Builders of HYDRAULIC STEAM, **ELEVATORS** With most approved Safety Devices.
 BELT and Hand-Power, PASSENGER and FREIGHT Dumb-Waiters, Automatic Hatch-Doors, &c.
 Office: 411 CHERRY STREET, PHILADELPHIA, PA.
 Works: FRANKFORD AVE., WILDEY & SHACKANAXON STS.
 Branch Office, 108 Liberty Street, NEW YORK.



"ECLIPSE" "STRAIGHT LINE"
ROCK DRILLS, AIR COMPRESSORS,
 Machinery for Tunneling, Grading, Mining, Quarrying, etc.
TEN COMPLETE TUNNELING PLANTS FURNISHED FOR SOUTH PENNA. RAILROAD, PA.

FOR CATALOGUES, ESTIMATES, &c., ADDRESS,
INGERSOLL ROCK DRILL CO., 10 Park Place, N. Y.
MORTON, REED & CO., Agents, Baltimore.



STANDARD COAL CO. SCREENED LUMP COAL for steam and machinery purposes a specialty.
For prices and freights, address

E. E. McCROSKEY, Prest.

JELICO MOUNTAIN COAL 56 Clinch Street, - - - Knoxville, Tenn.

J. A. J. SHULTZ, President.

B. C. ALVORD, Secretary.

SHULTZ BELTING COMPANY, ST. LOUIS, MO.

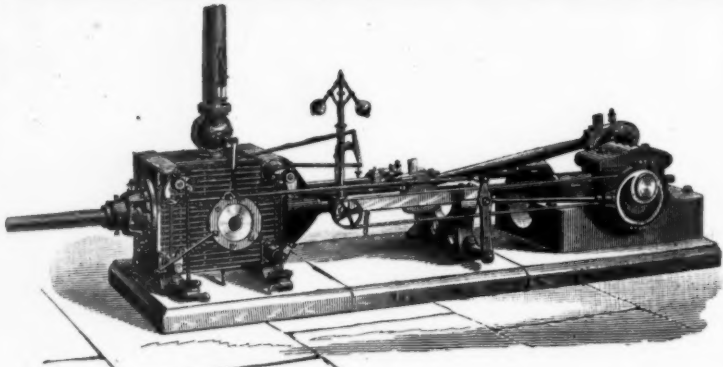
—Manufacturers of Shultz Patent Fulled Leather Belting, Lace and Picker Leather.—

OUR BELTING is made of Leather, tanned on the surfaces only; the interior (which is the fibre and strength of the hide) is not tanned, but Rawhide fulled and softened by our patent process. Our belting is more pliable, and hugs the pulley better and transmits more power than any other Belt. It does not pull out at the laceholes or rivets. It stretches less than any other Belt. It works equally well for the largest Driving Belts or for the fastest running machinery and smallest pulleys. OUR LACE LEATHER is made of Rawhide, by our patent process, without any tanning and is stronger and will wear better than any other. WE ALSO MAKE THE BEST PICKER LEATHER and BELT GREASE IN THE COUNTRY. Satisfaction guaranteed.

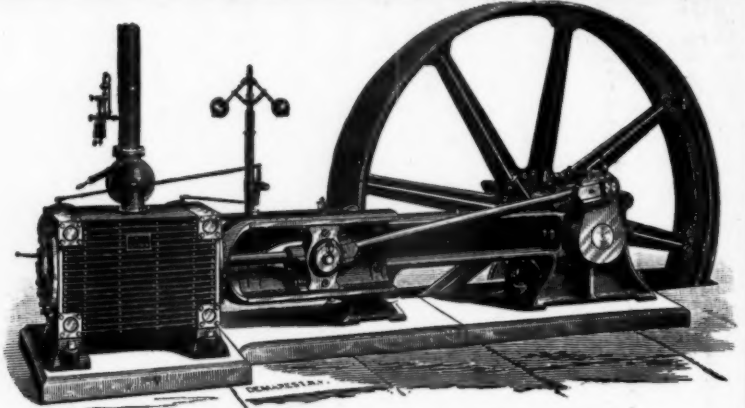
Southern Agents—FRED. N. OGDEN, New Orleans, La.

J. H. COFFIN & CO., Memphis, Tenn.

J. L. LINDSAY, Richmond, Va.



WROUGHT-IRON FRAME.—400 to 1,000 Horse-Power.



CAST-IRON FRAME.—Up to 600 Horse-Power.

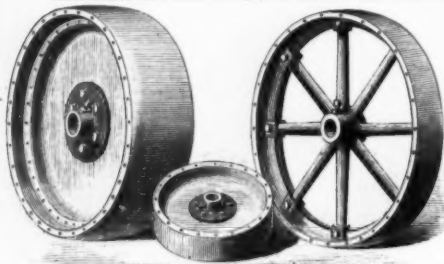
We regard
the

REYNOLDS-CORLISS ENGINE,

Built by E. P. ALLIS & CO.,
MILWAUKEE,

as in a marked degree the best of its type in respect to the design of its details, its massive construction and very superior workmanship. We call special attention to the wrought-iron bed, and invite examination of working drawings, which can be seen at our office. Or we will send same with one of our engineers to any party contemplating a purchase. These drawings show the superiority of detail design in a manner that cannot be approached in any advertisement or correspondence. Mr. Edwin Reynolds is probably at this moment the most successful designer of heavy COMPOUND CONDENSING ENGINES in the country. The high-duty PUMPING ENGINES, high-speed BLAST ENGINES (with Reynolds' patent metal air valves) and SEWAGE PUMPS, built by the above concern, represent the most advanced engineering. They also build an engine designed especially for high-speed service in rolling mills, having a positive valve motion, cut-off ranging to $\frac{1}{2}$ stroke and speed variable while running. The company makes a specialty of heavy work, being fully equipped with large tools. Having been appointed SOLE REPRESENTATIVES OF MESSRS. E. P. ALLIS & CO., we will estimate as such on heavy engineering construction for Cotton Mills, Rolling Mills, Steel Works, Blast Furnaces, Water Works, Municipal Improvements, &c. Send for our Circular of the Reynolds-Corliss Engine, giving comparative illustrations of details.

WESTINGHOUSE, CHURCH, KERR & CO.



THE AMERICAN PAPER PULLEY

has a driving power over three times as great as cast or wrought iron, or wooden pulleys. It will be found a complete remedy for slipping, over strained, and short belts, and does away with tighteners altogether. Our tests show this to be the most valuable improvement ever made in pulleys. Weight, one-half of iron. Freight less. Impossible to break. Single and double belt and double arm. We are competitive bidders on complete mill outfits of pulleys and shafting. Also paper friction wheels, friction rollers, and polishing wheels. We make a specialty of difficult cases in transmission, either by belt or friction.

Send for Descriptive Circular and Price List.

WESTINGHOUSE, CHURCH, KERR & CO.

WE ALSO REPRESENT
SENT THE

Sterling
LIMITED.



WE ALSO REPRESENT
SENT THE

Steel Co.
LIMITED.

Of Pitts

burg, Pa.

Manufacturers of FINE CRUCIBLE STEELS.

The "STERLING SPECIAL" Tool Steel is intended for the service usually required of the best foreign brands, and will be found a very superior steel. We also offer the "STERLING EXTRA" Tool, Best Die Steel, in bars or blocks, Rock Drill Steel, Crank Pins, Frog Bars, and Shape Forgings. The works are under the immediate supervision of Mr. C. Y. WHEELER, which is a sufficient introduction to the market. We particularly ask the attention of parties having severe requirements not satisfactorily met by steels now in use. Upon learning the conditions, a special mix will be made to meet same, regardless of quantity used. We will be pleased to make quotations, and solicit a trial order.

WESTINGHOUSE, CHURCH, KERR & CO.

Manufacturers and contractors often find dissatisfaction and difficulty in executing work from plans and advice which are purely professional, since such advice not only does not lie under the financial responsibility for the work, but may at the same time invalidate the responsibility of the contractor. Believing that the entire responsibility, both engineering and financial, should be inseparable,

WESTINGHOUSE, CHURCH, KERR & CO.

CONTRACTING AND CONSULTING

MECHANICAL ENGINEERS,

DESIGN AND ESTIMATE ON COMPLETE PLANTS FOR THE

Generation, Transmission and Application of Power,

And contract for the erection of same on their own capital and responsibility.

OUR BUSINESS is conducted in three departments, each of which is under the detail supervision of the Principals.

CONSULTING MECHANICAL ENGINEERS.

We design, locate and supervise the operation of power plants; investigate, report upon, and design special applications of power, special machinery and processes; make expert tests of power, duty, &c.; inspect and supervise mechanical construction, &c. For this service we make a reasonable charge.

CONTRACTING ENGINEERS AND SALESMEN.

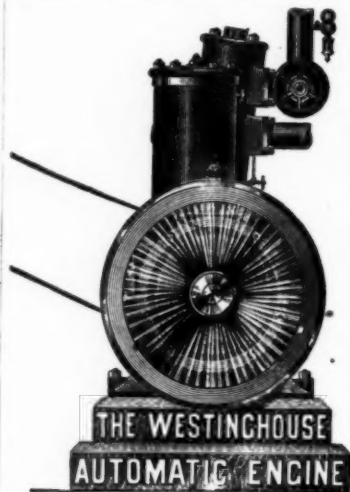
We design and contract for Boilers of all kinds; Engines, high or low speed, condensing, compound, and marine; heavy Pumping and Blowing Engines; Sewage Pumps; Rolling Mill Engines, &c.; heavy and light shafting, gears, pulleys, &c.; and special machinery. Our long experience in this business has naturally led up to the preference of certain special constructions (some of which are illustrated in the margin) as the best of their type. To enable us to handle these in competition, we have assumed the Selling Department of each by special contract with their respective makers. We handle nothing on Commission, but employ an ample capital to purchase outright and place the product at low figures for cash, bringing our own responsibility into every transaction. In this department we employ a competent force of engineer-salesmen, who are at the service of our customers on call. No charge is made for professional services in connection with our contracts.

PURCHASING AGENTS.

We are thoroughly posted on the machinery market, in which we are discriminating cash buyers. This enables us to purchase machinery and supplies to order for our clients at closer figures than can be obtained by a buyer not on the ground. We insure bottom prices by taking no commission from the seller, but charge the buyer a small rate on the net purchase. Finally, we do not allow professional consideration to deter us from properly advertising our business.

Very respectfully, WESTINGHOUSE, CHURCH, KERR & CO., 17 Cortlandt St., N. Y.

H. H. WESTINGHOUSE, WM. LEE CHURCH, WALTER C. KERR, ISAAC H. DAVIS.

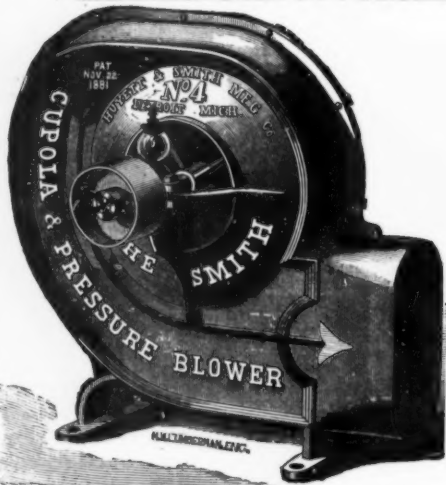


THE WESTINGHOUSE AUTOMATIC ENGINE

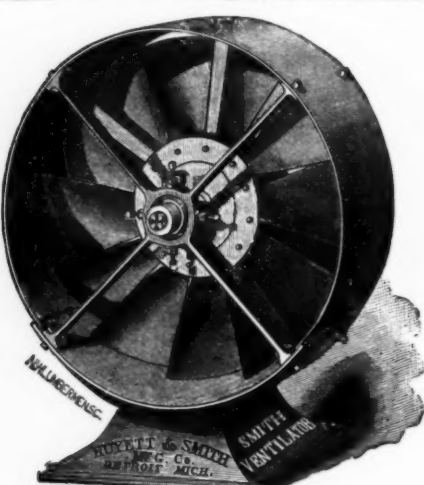
And our connection with same is now too well known to need any special advertising—4 to 200 H. P.

WESTINGHOUSE, CHURCH, KERR & CO.

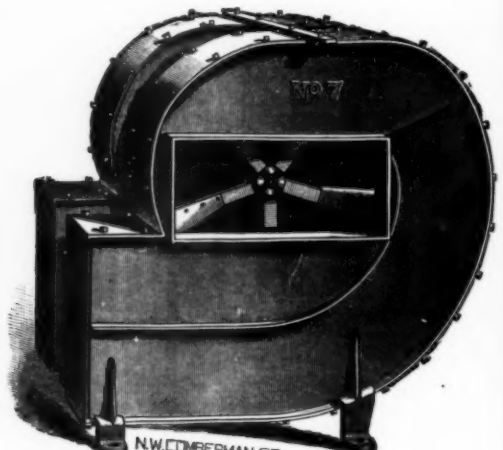
We have carefully prepared Special Circulars with valuable information on Paper Mills, Saw and Planing Mills, Rolling Mills, Electric Lighting, Flour Mills, Railroad Applications, Centrifugal Pumps, &c. Free on application.



PRESSURE BLOWER.



VENTILATING WHEEL.



DOUBLE EXHAUST FAN.

— In placing the **SMITH FAN**, Made by the HUYETT & SMITH MFG. CO., Detroit, Mich., —

on the Eastern market, we have satisfied ourselves that it is a bona fide and radical improvement. This statement is the result not of opinion, but of ACTUAL TESTS, conducted by ourselves as a preliminary to our own contract. While the exact results will vary with the conditions, it may be accepted that the HUYETT & SMITH FAN (exhaust or pressure) will deliver a given volume and pressure of air on ONE-THIRD LESS POWER than any other. This is due in general to the double discharge openings, relieving twice in each revolution and to the shape of the wheel, preventing interference of currents, and cannot be said of any other Fan in the market. The Ventilating Wheel appears to be the only one which is free from back lash through the centre. We treat this matter more fully in our Illustrated Fan Circular. Sent free on application.

WESTINGHOUSE, CHURCH, KERR & CO.

AMERICAN SUPPLY COMPANY,

Formerly Myron Fish & Co., of Valley Falls, R. I., and Kendrick Loom Harness Co., of Providence, R. I.

—MANUFACTURERS OF—

LOOM HARNESS AND REEDS,

Oak Belting, Lace and Picker Leather, and Dealers in Supplies for Cotton, Woolen and Silk Mills.

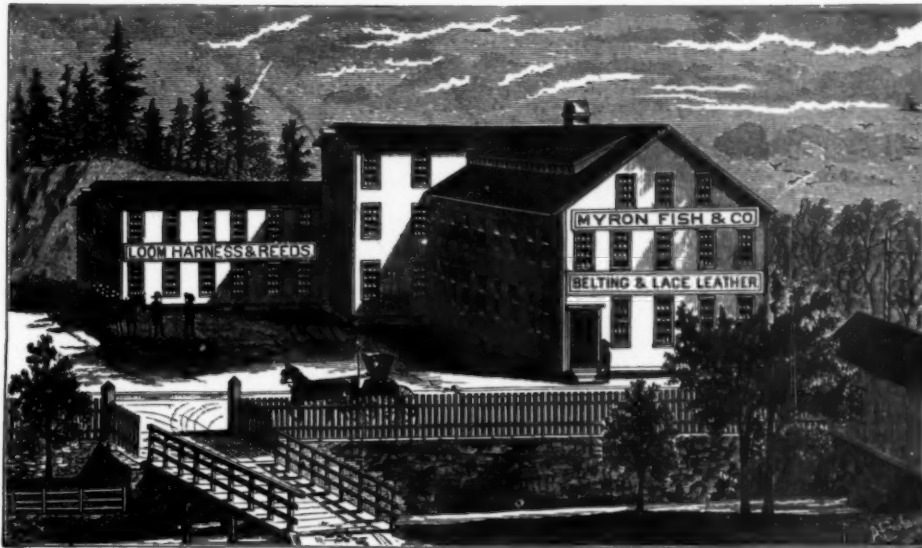
Agents for Joseph Moone's Sons'

Roller, Slasher & Clearing Cloths.

—Agents for—

RODDICK'S PATENT IMPROVED OIL CANS.

Calf, Sheep and Lamb Roller Skins, and Roll Covers' Tools.



WE HAVE
Unequalled Facilities for Furnishing
Shuttles & Heddle Frames,
WIRE HEDDLES and WIRE GOODS
Of all Descriptions.

—Special Notice to Worsted and Silk Mills.—

We Manufacture both Worsted and Cotton Machine-Knit Mail Harness for Weaving Fine Worsted and Silk Goods. Also a Full Line of Supplies for Jacquard Looms.

Office and Salesrooms, 10 Exchange Place, Providence, R. I. —FACTORIES:— PROVIDENCE and VALLEY FALLS, R. I.

A. D. LOCKWOOD, Pres. JOHN KENDRICK, Vice-Pres. MYRON FISH, Treas. JOHN A. CARTER, Sec. JOSEPH H. KENDRICK, Gen'l Agent.

THE WHITIN MACHINE WORKS,

J. LASSELL, President and Treasurer.

G. E. TAFT, Agent.

H. ELLIS, Superintendent.

—MANUFACTURERS OF—

COTTON MACHINERY

Openers, * Lappers, * Cards,

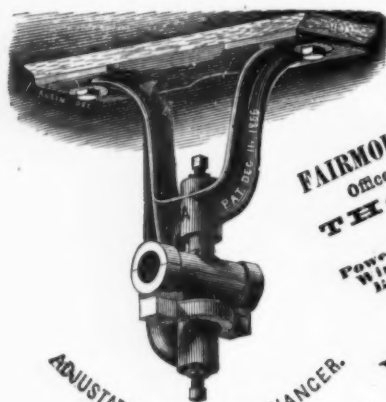
Railway Heads, Drawing,

RING SPINNING, SPOOLERS, WET and DRY TWISTERS,

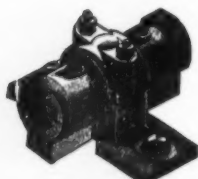
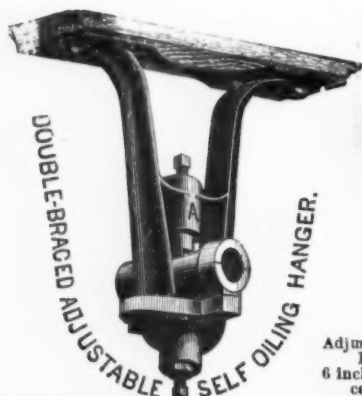
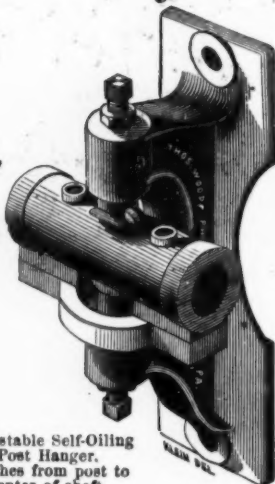
REELS,

WARPERS, * DRESSERS, * LOOMS, * &C.

Whitinsville, Worcester County, Mass.



ADJUSTABLE SELF-OILING HANGER.

Ball and Socket
Self-Oiling Pillow Block.DOUBLE-BRACED ADJUSTABLE
SELF OILING HANGER.Adjustable Self-Oiling
Post Hanger.
6 inches from post to
center of shaft.Adjustable Self-Oiling
Post Hanger.
6 inches from post to
center of shaft.

FAIRMOUNT MACHINE WORKS.
Office, 2106 Wood St., Philadelphia.
THOMAS WOOD,
Manufacture as Specialties

Power Looms, Patent Hobbin or Quill
Winding Machines, Plain and Presser
or Spooling Machines, Reeling,
Warp Spinning, Filling and Cal-
endering Machines,

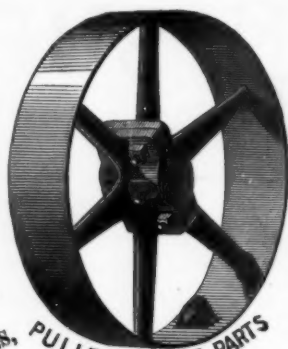
WARPING MILLS,
16, 18 and 20 yards Circumference,
WITH IMPROVED HECKS,
SHAFTING,
With Patent
ADJUSTABLE SELF-OILING HANGERS, PULLEY IN TWO PARTS
8, 10, 12, 15, 18, 20, 24 and 30 in. drop.

Also WALL, POST AND GIRDER HANGERS.
Pulleys, from 4 inches to 10 feet in diameter.
PATENT FRICTION PULLEY.
Pulleys in two parts, any size required.
PATENT HOISTING MACHINES.
Oil Presses for Lard, Fish and Paraffine.

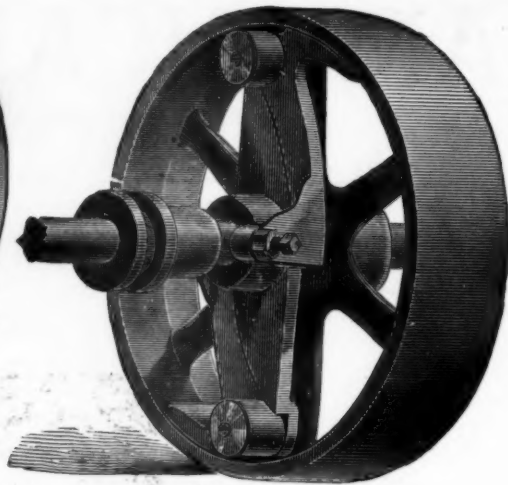
Special Driving,
such as Angular, Muley, and Gallows Driving,
furnished for any position
where possible to transmit power by belts.
PULLEYS from 4 inches to 10 feet in diameter.

Why use old style Bearings, that require oiling
every day, when you can get Bearings at less cost
that only require oiling once in Six Months, and
thus save oil and labor enough to pay for the bear-
ings in use. Test the matter for yourselves; a
trial always secures the trade.

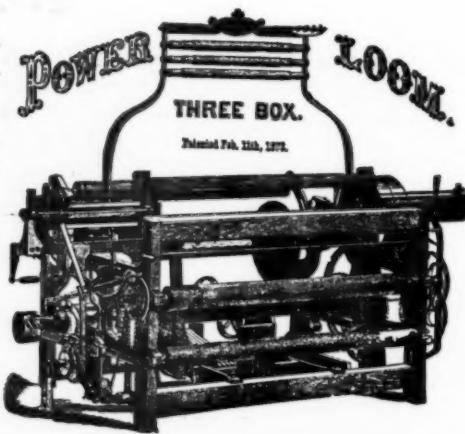
ADDRESS,
THOS. WOOD,
Office, 2106 Wood St.
PHILADELPHIA, PENNA., U. S. A.



PULLEY IN TWO PARTS

**PATENT FRICTION PULLEY.**

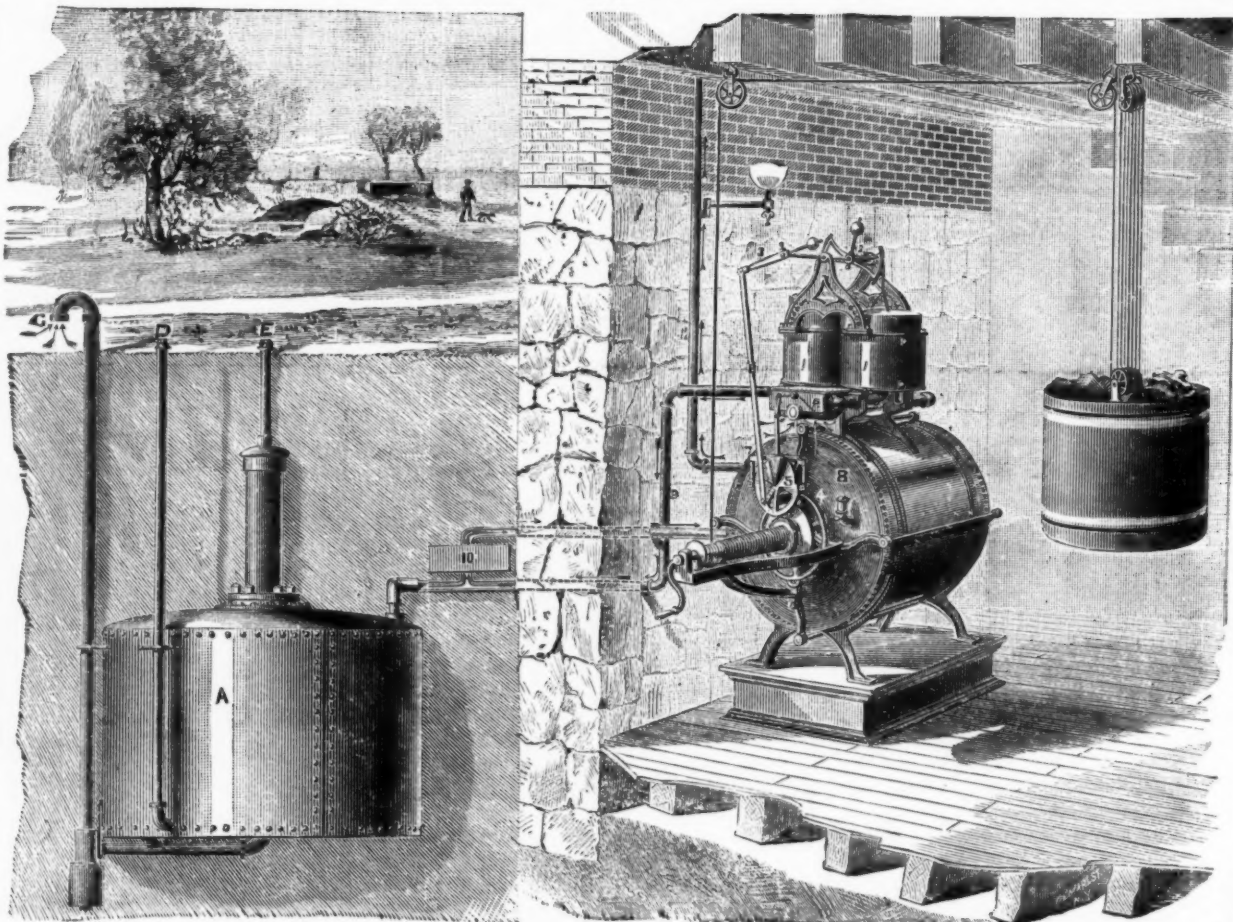
Simple, reliable and very durable.
Suitable for any kind of driving, they
serve equally well as driver or driven.



POWER LOOM.
THREE BOX.
Patented Feb. 11th, 1871.

TIRRILL'S EQUALIZING GAS MACHINE!

Only Gas Machine
that makes
UNIFORM
GAS.
No Fire,
No Smoke,
No Smell.
Plain Bat Wing
Burners only
Required.
GAS ALWAYS
Perfect.



Less than \$1.
Per Thousand
Feet.
Machines of any
CAPACITY.
Read Circulars
Before Buying.
Simple,
Perfect,
and Reliable.
Absolutely
Safe.
Approved by
Underwriters.
Read who en-
dorses Them.

FOR CIRCULAR AND FULL INFORMATION, ADDRESS:

TIRRILL'S GAS MACHINE CO., 39 Dey St., New York, N. Y.

HOWARD & BULLOUGH, & RILEY,

BUILDERS AND IMPORTERS OF

COTTON MACHINERY.

ALSO, IMPORTERS OF

Wool, Worsted and Flax Machinery and English Card Clothing. Hardened and Tempered Steel Wire a Specialty.

MILL ENGINEERS.

No. 19 PEARL STREET, BOSTON, MASS.

GREAT SUCCESS OF OUR
PATENT ELECTRIC STOP-MOTION,

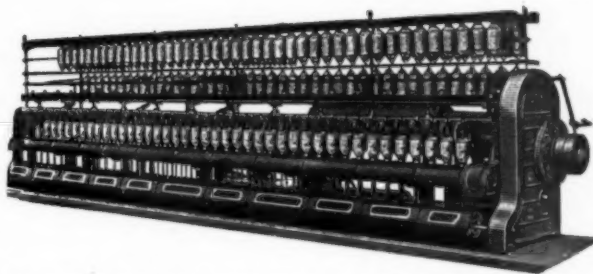
ALREADY APPLIED TO OVER

9,000 DELIVERY HEADS
OF DRAWING, AND
62,000 INTERMEDIATE
ROVING SPINDLES.

The quality of Sliver produced by our Frames
surpasses all others, and Waste, Single and Roller Laps
are prevented, and production increased.

Correspondence Solicited.

Send for Circulars.



SPECIALTIES:

EXHAUST OPENERS, LAPPERS, (LORD'S
EVENERS,) IMPROVED ROLLER CARDS,
PRODUCE MORE AND MAKE LESS
WASTE THAN ANY OTHER.

7,000 SELF-STOPPING WARPERS,
Already working with latest improvements.

800 CYLINDER SLASHERS
Now at work in America alone

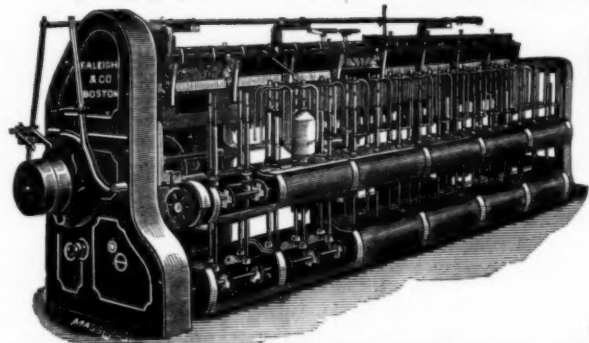
Patent and plain Spindle, Spinning and Twisting Frames,
Spoolers, Reels and Circular Warpers, Cloth Folders, Size Kettles
plain and Fancy Looms, Spindles, Flyers and Fluted Rolls.

SLUBBING AND ROVING FRAMES WITH LATEST AND BEST IMPROVEMENTS.

F. A. LEIGH & CO.

Importers of Mill Machinery,

—No. 40 WATER STREET, BOSTON, MASS.—



Openers, * Lappers, * Cards, * Drawing,
Slubbing and Roving Frames,
CARD CLOTHING, ETC.

Correspondence Solicited.

Send for Circulars.

WHITINSVILLE SPINNING RING CO.

WHITINSVILLE, MASS., U. S. A.

SUPERIOR WORKMANSHIP.

NOT EXCELLED IN DURABILITY.

EVERY RING WARRANTED.



The Simplest and Best Method of Adjusting Rings.



SEND FOR SAMPLE AND PRICE-LIST.

MOSHELEY'S CELEBRATED MOLLIS OIL.

It is a splendid lubricator for Stationary Engines, Printing Presses, Paper Mills, Saw Mills,
Cotton and Woolen Mills, Spindles, &c. It is the cheapest and best Oil for Machinery, Har-
ness, Belts, Boots and Leather generally. Warranted a Water-Proof Leather Preservative.
It is penetrating, and renders soft and pliable the hardest leather.

Fire-Proof, Barn, Fence, Bridge and Roof Paint

MIXED READY FOR USE.

Our Fire-Proof Barn, Fence, Roof and Bridge PAINT is unsurpassed for painting exposed surfaces, such as Tin, Iron or Wood Roofs, Wagons, Farm Implements, Fences, Barns, Cars, &c., &c.
mixed ready for use, will not settle, will be found convenient, saving labor and time, and at the same time is handsome and durable. SOLD IN ALL-SIZED PACKAGES FROM 1 to 50 GALLONS.

Prices Mailed on Application. **HIRSHBERG, HOLLANDER & CO., 195, 197, 217 and 240 W. Pratt St., Baltimore.**

BILLINGS' PATENT BREECH-LOADING SINGLE BARREL SHOT GUN.

Provided with Close
Shooting Detachable
Muzzle for contracting
the shot.

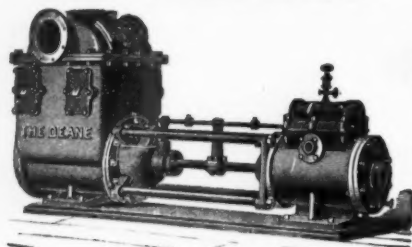


Uses the "A"
Brass or Paper
Shells.

MANUFACTURED AND FOR SALE BY

THE BILLINGS & SPENCER CO.,
HARTFORD, CONN.

THE DEANE STEAM PUMP CO., HOLYOKE, MASS.



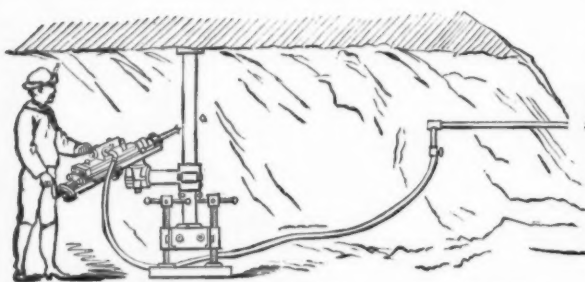
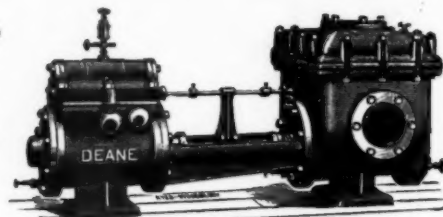
MANUFACTURE
Every variety of Pumping Machinery

VACUUM PUMPS FOR SUGAR WORK, ETC.

IRRIGATION PUMPS ARE SPECIALTIES.

Water Works Pumping Engines for Cities and Towns.

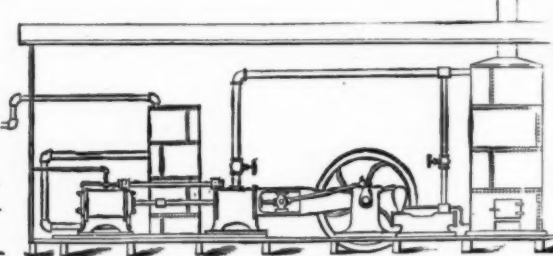
SEND FOR NEW ILLUSTRATED CATALOGUE.



ROCK DRILL.

HOSE.

AIR PIPE.



AIR RECEIVER.

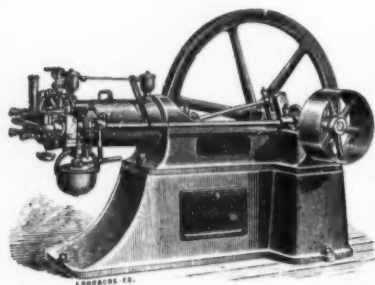
AIR COMPRESSOR.

FEED PUMP. BOILER.

RAND DRILL CO.

23 Park Place, NEW YORK.

Rock Drills,
Air Compressors, and
General Mining Machinery,
Rackarock Blasting Powder,
Blasting Batteries and Fuse.



Over 14,000 in Use.

Otto Gas Engine

20 to 70 per ct. less Gas
consumption than
ANY other ENGINE.

Working Without Boiler, Steam, Coal, Ashes or Attendance.

Started instantly by a Match, it gives full power immediately. When stopped, all expense ceases.

No explosions, no fires nor cinders, no gauges, no pumps, no engineer or other attendant while running. Recommended by insurance companies. UNRIVALLED IN EVERY RESPECT for hoisting in warehouses, printing, ventilating, running small shops, &c. Sizes: 1 to 25-horse power.

Branch Office, 214 Randolph St., Chicago.

SCHLEICHER, SCHUMM & CO., N. E. cor. 33d and Walnut Sts., Philadelphia.

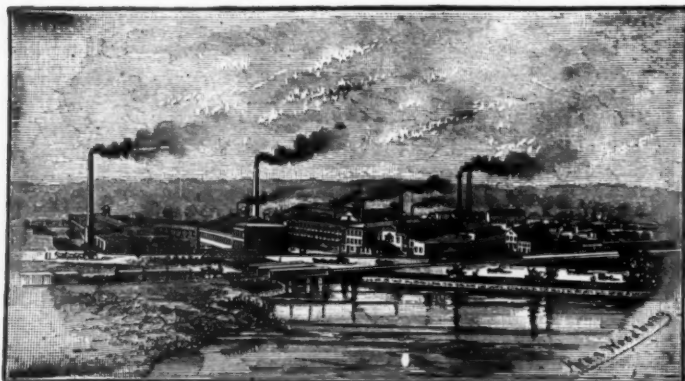
GEORGE DRAPER & SONS, Manufacturers of COTTON MACHINERY HOPEDALE, MASS.

Telegraph Address and Railroad
Station, MILFORD, MASS. }

Do not fail to visit the World's Exposition at New Orleans, La., and see in operation OUR NEW and IMPROVED MACHINERY for ROVING, SPINNING, SPOOLING, WARPING and TWISTING.

Washburn & Moen Manufacturing Co., Worcester, Mass.

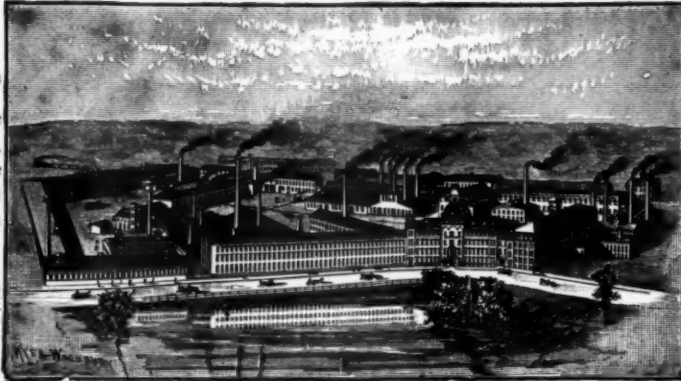
Wire Drawers, and Manufacturers of Iron and Steel Wire of Every Description.



Iron and Steel Telegraph
and Telephone Wire.

Patent Steel Wire Bale
Ties, Pump Chains,
Chain Wire, Steel Wire
for Springs, Needles and
Drills, Watch Main
Springs.

Send for Price-Lists,
Circulars and Descriptive
Pamphlets on Our
Specialties.



NEW YORK WAREHOUSE:
21 Cliff Street,
New York City.

GLIDDEN PATENT STEEL BARB WIRE.

The Best Fence Material in Use.
For Sale by Special Agents and Hardware

Proof against Fire, Wind and Flood.
Dealers in all Parts of the United States.

CHICAGO WAREHOUSE:
107 Lake Street,
Chicago, Illinois.

BALTIMORE Manufacturers' Record.

Published Every Saturday by

BIGSBY & EDMONDS.

B. H. Edmonds. J. W. Bigsby. Wm. H. Edmonds.

R. H. EDMONDS, EDITOR.

—OFFICE,—

71 and 73 Exchange Place, Cor. Commerce St.,
BALTIMORE.

NEW YORK BRANCH OFFICE:

Room 8, No. 118 Fulton Street,
J. W. BIGSBY, Resident Partner.

—SOUTHERN OFFICE, ATLANTA, GA.—

I. W. AVERY, Manager.

JAMES L. ELY,

Advertising Agent for New York and Vicinity.
Room 14, 29 Park Row, New York.

Price of Subscription Per Year in Advance:

(POSTAGE INCLUDED.)

To UNITED STATES AND CANADA, \$3.00
OTHER COUNTRIES, - - - 4.50

ADVERTISING RATES:

One square (14 lines Agate, 1 inch) 1 time... \$ 1.50
" " " " " 4 " " " " " 5.00
" " " " " 3 mos. " " " " " 10.00
" " " " " 6 " " " " " 18.00
" " " " " 1 year " " " " " 32.00
For advertising on outside pages add 50 per cent. to
the above rates.
Reading Notices 50 cents per line each insertion.

BALTIMORE, APRIL 18, 1885.

CORRESPONDENCE relating to the manufacturing, mining, lumbering and all other material interests of the Southern States is solicited. Reaching so many capitalists in all parts of the United States seeking profitable investment in the South, the MANUFACTURERS' RECORD offers an excellent chance for the people in that section to place the advantages of each locality before those likely to be interested. We will take great pleasure at all times in telling what has already been accomplished in the South, and showing up the opportunities of doing still more.

J. W. SLOSS, Birmingham, Ala., president of the Sloss Furnace Co., owner of two furnaces having an aggregate annual capacity of 60,000 tons, says that as soon as the demand and prices for iron improve, his company will build one or two new furnaces.

THE Iron Trade Review, Cleveland, Ohio, has published a chart, showing on one side the prices of pig iron at Cleveland for 13 years and on the other side the shipments of Lake Superior iron ores for 27 years.

THE MANUFACTURERS' RECORD, published in Baltimore, Md., is a newspaper that is exclusively devoted to the progress of the South, the development of its great resources, and the building up of Southern manufactures.—*New Era*, Blountsville, Ala.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South, cannot find a better medium than the BALTIMORE MANUFACTURERS' RECORD. We are always prepared to furnish proof of our claims as to circulation.

Activity in Furnace Building in the South in the Near Future.

The people who persistently claim that there is no profit in making iron at the South, will doubtless be rather surprised at the very large increase to be made in the number of Southern furnaces. At Dayton, Tenn., two furnaces, of 100 tons capacity each, are under construction; at Anniston, the Woodstock Iron Company will build two 100-ton furnaces; at Birmingham the Pratt Coal and Iron Co. will build two, and we understand have already given orders for part of the machinery. The Mary Pratt Furnace Co., of Birmingham, it will be remembered, lately wrote to the MANUFACTURERS' RECORD that they would shortly build an additional furnace, and it is now stated by Col. J. W. Sloss, president of the Sloss Furnace Co., that as soon as the iron business revives, his company will build one and possibly two furnaces. Mr. Samuel Thomas, president of the Thomas Iron Co., previously reported as contemplating the investment of about \$1,000,000 in a furnace and other iron industries near Birmingham, to develop his extensive mineral property, intends to do so; but under date of March 31, wrote to the editor of this paper that the probabilities were against his doing so this year. A contract has been made for a 100-ton furnace to be erected at Sheffield, Ala., as soon as the proper railroad facilities have been secured, and there are prospects for still more furnaces in Alabama and Tennessee in the near future. It can readily be seen what a heavy increase will be made in Southern pig iron production by the erection of these furnaces. There must certainly be a good many people who have faith in the ability of Southern furnaces to make money.

The outlook for the industrial growth of the South continues very favorable, and, as soon as business revives, a decided activity in the investment of money in the South by Northern and European capitalists may be expected. The preparations for the building of so many furnaces show that there is already a better feeling among business men, and that some of them at least are looking for an early improvement. The building of these eight or ten large furnaces will be a very important event in the industrial history of the South.

J. W. HENLEY, of the Virginia Tin Company, lately stated to a reporter of the Lynchburg News "that his company had the biggest thing ever discovered in the United States." He said "that they had gotten out from 1,500 to 1,800 tons of ore since Christmas which would average 30 per cent., and were now getting out from 35 to 40 tons a day. One of the veins has exceeded their most sanguine expectations. It was thought that it would only be 4 feet in width, but it turns out to be fully 120 feet wide and of very fine ore. As soon as possible the company will erect a furnace and smelt the ore."

The Financial Troubles at Norfolk.

The failure of several large banking institutions at Norfolk, Va., due to the outrageous mismanagement of one of these banks, by which one firm was enabled to borrow \$1,200,000 from it, when, according to the law, no firm should be allowed to become indebted to a national bank to an amount greater than one-tenth of the bank's capital stock, which in this case would have been \$30,000, has produced much trouble in that city and caused some despondency as to the future. Doubtless this is very natural under the circumstances, and for a while there may be considerable business depression in Norfolk, but there is no danger, we think, of any permanent injury of magnitude to the trade and commerce of that port. Norfolk is splendidly located for foreign commerce as well as for domestic trade, and her natural advantages, combined with the well-known energy and enterprise of her merchants will be sure to enable them to recover from any temporary loss of business. The city is still there, the splendid railroad and steamship facilities and all other advantages hitherto possessed, except the loss of considerable capital, are all there. With confidence restored, as it soon will be, Norfolk will again push forward in the upbuilding of her trade and commerce, entirely overcoming in a short time the effect of the late disasters, which, it should be remembered, were not due to the lack of profit in business but to other causes.

The Atlanta Commercial Convention.

The address published in another column in relation to the proposed Commercial Convention to be held in Atlanta, Georgia, in May, is well worthy of consideration. A gathering of business men in a convention of this character to discuss purely business matters ought to be productive of great good. It is important, in fact, essential to the success of the convention that it should be composed of representative men in all lines of industry, and unless the attendance of men of this kind can be secured, it would be much better to abandon the project. We anticipate, however, that Atlanta, which is capable of great things, will be equal to the task that her business men have undertaken. Outside of the good to be derived by general business interests from this convention, is the great good that the South will secure by the presence of many Northern and Western capitalists and manufacturers. They will be able to see for themselves that the half has never been told of the South's vast undeveloped resources. Their investigations in this line will almost surely lead to large investments in Southern property or in Southern enterprises.

Advertising by States.

The States of Texas and Florida are spending much money and printer's ink in advertising their advantages and attractions for immigrants. They desire new people, and they are ready to spend time and money to secure them. They have great inducement, and they are fully aware that it pays a State as well as it does an individual to advertise, knowing that all money thus spent comes back many fold into the treasury in the way of additional revenue. Tennessee, with much greater advantages and resources than any of these, seems to be largely trusting to people finding it out for themselves. Her commissioner has done as well as he could with what he had, and her exhibits at Boston and at New Orleans have repaid their cost many times over. The State is not disposed to spend very much money in that way, and the railroads with one exception are doing but little to encourage immigration by arranging excursions or otherwise; nor under the condition of things during the past two years could they be expected to do so. They have done all they could in the way of free transportation of men and material; consequently it depends largely on the owners of mines and minerals beds, quarries, water power and other resources needing development to furnish the money for this advertising, and there is no investment they can make that will pay them as well.—*Union*, Nashville.

Florida, we believe, is doing more to attract immigration than any half a dozen other Southern States. Florida and its attractions are heard of everywhere and tens of thousands of dollars are spent by the business men and the railroads of that State to advertise its advantages. The Florida papers are probably more liberally supported in proportion to population than any other papers in the country; they are crowded with local advertisements, and as a natural result they are able to do great good in attracting attention to the State. We believe that the present enormous immigration to Florida will be far exceeded within a few years and that that State will be one of the most prosperous in the Union. While Florida is thus reaping the advantages secured by the enterprise of her people, it is to be regretted that the other Southern States are doing so little to set forth their resources and attract immigration.

COL. BENNETT H. YOUNG, president of the Kentucky Union Railroad, in a late address upon the need of more railroads in Kentucky, said:

"The developed wealth of Kentucky is immense, but when compared to her undeveloped wealth it sinks into insignificance. Her coal fields are the best in the world. Already she produces one-thirtieth of all the coal in the world. She has two boundless coal fields—one in the eastern portion of the State and one in the western. That in the eastern portion of the State is far superior to that found in the western, yet there was no coal mined in the eastern portion when compared to that taken from the western. Why? Because Western Kentucky had better facilities for transportation. The coal mines in Kentucky are more safely and easily worked than those of any other State. With greater railroad facilities Kentucky could furnish better and cheaper coal than any other State in the Union. The coke interests of Kentucky are almost as great as those of Pennsylvania, yet for lack of the proper railroad facilities we must depend on Pennsylvania for our coke. Kentucky has inexhaustible oil fields, yet she produces only seven barrels per day. The reason is evident. There are only six States that have more iron in their territory than Kentucky, yet Kentucky furnishes only one eight-hundredth of all the iron to the manufacturing world. Her timber resources are greater than that of any of the adjoining States, yet for a lack of proper railroad facilities her timber could not be utilized."

The Exposition.

[Special correspondence BALTIMORE MANUFACTURERS' RECORD.]

NEW ORLEANS, LA., April 10, 1885.

If those critics who deny or doubt the correctness of the RECORD's figures on the industrial growth of the South, would visit the Exposition at this time, they would be made to believe that if there is an error at all in these statements it is in placing the amount of the increased wealth too low.

In most of the Southern States the exhibits are of such a character as to show, beyond the shadow of a doubt, that the industries of this section are becoming almost as varied as the natural resources, while the display of mineral, agricultural and forestry products demonstrate conclusively the great possibilities of the future. Some one in making a comparison between the exhibits at this Exposition and those at the Atlanta Exposition of 1881, called attention to the fact that at the latter the chief feature in Southern departments was cotton, while here it is grain and fruits, thus showing much greater diversity in the crops than exhibited prior to 1881, and I may add to this statement that while comparatively little attention was given at Atlanta to manufactured products, considerable space has been filled here with specimens from the cotton and woolen mills, the iron foundries and the coal mines. Nor does this department close with the products mentioned, but exhibits representing the smaller industries are conspicuous. In both the Government and the Main Buildings there are displays from cotton-seed oil mills, from machine shops, from carriage factories, from shingle mills, from turpentine stills, from hosiery factories, from bagging factories and from many smaller enterprises that have developed in the past few years.

Nothing has surprised visitors more than the mineral and timber resources of the South, which are fully illustrated in the State exhibits. The coal and iron from Alabama and Tennessee, the gold, silver, iron, lead and copper ores from Georgia, North Carolina, Tennessee and South Carolina, and the wonderful variety and quality of the woods from all the Southern States, show to the capitalist the room there is for the investment of money, while the full exhibits of the products of the mines and factories in operation show that the stream of gold is already flowing in this direction.

Among the new industries represented in the Main Building is the

CHALMETTO MILLS OF NEW ORLEANS.

This mill produces cotton-seed oil, crude and refined, cotton-seed cake and meal, cotton goods and commercial fertilizers, and they are exhibiting a full line of their goods.

Messrs. G. Ober & Sons Company, of Baltimore, own an interest in these mills, and the high reputation their fertilizers have obtained throughout the country is fully maintained in the goods put out by them here. They can easily purchase all the crude materials needed in the different branches of manufacture in this State, except the phosphate rock used in their fertilizers, and this comes from South Carolina. Having such advantages as these, and being located at the place where the greatest amount of their products are consumed, there is every reason to suppose that the mills will be successful.

Opposite the Chalmetto exhibit is the exhibit made by the

MAGINNIS OIL MILL,

of New Orleans. This mill produces from the cotton seed, soap, oil, cake, meal and batting, the latter being made from the lint taken from the seed. This mill is said to be in a very prosperous condition.

There are eight cotton seed oil mills in this city, and all of them are prospering. They exchange with the farmer, one ton of commercial fertilizers in the spring for 3½ tons of cotton seed in the fall. Some of the mills exchange one ton of cotton-seed meal for two tons of seed. This is regarded by the agricultural chemist as a perfectly fair

arrangement for both sides. It is said that the oil in the seed, which is now considered a valuable commodity, prevents the rapid decomposition of the seed when they are used for fertilizing the crops, and that the meal, being free from this oil, is consequently far better for agricultural purposes than the unground seed, so that in having the oil expressed the farmer gets rid of a perfectly useless, if not hurtful ingredient, while the manufacturer obtains an important commercial product.

These mills have, within a very short period, sprung up throughout the cotton belt, and so long as they return to the cotton farms the product of the seed, they will be of vast benefit to the agricultural interests of the South. One of the most attractive exhibits in the annex to the Machinery Hall is that of the

S. A. WOODS MACHINE COMPANY,

of New York, Boston and Chicago. It contains fourteen machines in all, including a heavy planing and matching machine, fast feed flooring machine, combined molding, tonguing and grooving machine, double and single surfacing machines, jointing and facing machine, large double iron saw table, two buzz planers of improved pattern, panel planer and knife-grinding machine.

The fast feed flooring machine, both in design and construction, is a creditable representation of the most advanced practice. It has been designed with special reference to high speed and fast feed, to meet the requirements of large mills, and at the same time produce the best work. To meet these requirements the greatest care has been bestowed on its construction, every part being proportioned with special reference to convenience of operating and durability. Besides these elements of excellence the machine embodies several novel features, of which an important one is a set feeding-out rolls beyond the cutter head.

The Woods Company claim a number of points of superiority for their new pattern six roll double surfacer. It covers a large range of work, being capable of doing the finest shop planing as well as heavy work up to 12 inches in thickness and 24, 27 and 30 inches wide. The feed power has some peculiar and important features. It consists of six inch rolls, the upper train being driven direct from the feed shaft by a chain and the lower set by an oblique shaft, which is always in adjustment for any thickness. By thus driving both trains direct from the feed shaft, expansion gears are dispensed with and even feed is insured with less strain in the gear. The improved jointing machine is built of two sizes with table 5 feet 8 inches, or 7 feet long, to plane 12 to 16 inches wide. This machine will be found very convenient for planing out of wind, making glue joints, and for such miscellaneous uses as rabbeting, jointing, chamfering, beveling, grooving, squaring up, working beads, circular moulding, &c.

While this company has sold its machines all over the world the greater part of its trade heretofore has been in the West and Southwest, and the exhibit here was made more especially for the purpose of increasing the business in the South. It is gratifying to know that the company has accomplished its object and the gentlemen in charge are very well satisfied with the success they have achieved. The exhibit is under the charge of Mr. I. R. Joslin, Jr., and he is assisted by Mr. Henry Faxan, Jr. Mr. Joslin is the vice-president of the company, and has had 20 years experience in handling machinery.

Some efforts are being made to have the Exposition closed on the 31st of May, as advertised, and re-opened in December. Mr. Speed, the special commissioner from the World's Exposition at London, has been before the Board of United States Commissioners and urged these representatives of the States to transfer their exhibit to London. It is believed that if they are allowed to remain here during the summer, and exhibited for a few months in the winter, that

it will be much better than to break them up and return them to the various States. It is thought, too, that if it is known throughout the country that all of these exhibits are to remain, and that they will all be in position at the re-opening, that the attendance next winter will greatly exceed the number who have attended this season. The commissioners very generally favor this idea, provided financial arrangements can be made that will enable them to meet the expenses of maintaining their exhibits. While there is therefore a possibility that the Exposition may be re-opened next winter, no one who contemplates visiting New Orleans should stay away now on that account, or they might be greatly disappointed. The exposition is now at its best. Everything is fully arranged; the weather is lovely; the orange trees are blooming while the last season's fruit is still on the trees; the visitors are increasing and the daily receipts at the gates far exceed the expenditures. The accommodations in the city are ample and reasonable, and no better time could possibly be selected for a visit to the Queen City of the South than during the months of April and May.

L. A. R.

Notes * From * Dixie.

BY CHAS. H. WELLS.

The appointment of ex-Governor Jarvis, of North Carolina, as minister to Brazil, has caused great satisfaction in the old North State. Mr. Jarvis was born in Currituck county, N. C., in 1836, and is, therefore, not yet fifty years of age. He was educated at Randolph Macon College, Va., where he graduated in 1860. He entered the Confederate service as a private, but soon rose to the rank of Captain. He lost the use of his right arm by a wound received at Drury's Bluff. Since the war he has served in various legislative bodies in this State, and in 1876 he was elected Lieut. Governor on the ticket with Z. B. Vance for Governor. In 1880 he was elected Governor, in which position he has served with ability for four years, his term of office expiring January 1, 1885.

In Macon, Georgia, the other day, a gentleman picked up a shining pebble from among the gravel on one of the public streets. It proved to be a rough diamond, and will be worth at least \$1,000 when cut. In Raleigh, N. C., last week, a negro boy picked up a rough, uncut diamond in the suburbs of the city. It has been sent North to be cut and will be worth from \$3,000 to \$5,000. The mineral wealth of the Piedmont region is certainly worth looking into if diamonds are to be found lying around loose.

The Piedmont Press says the First National Bank of Salisbury, N. C., has paid the stockholders *thirteen per cent.* in one year and has a surplus of nearly \$8,000. With such a showing as this, would it not pay the Northern capitalists to invest in the banking business down here? There are good openings at Newton, Catawba county, N. C.; at Hickory and Statesville, N. C.; at Laurens, Greenwood and Greenville, S. C. Very few of these Southern banks earn less than *twelve per cent.* a year clear money above all expenses.

As an instance of what patient, energetic hard work will do, the Hickory, N. C., papers tell of a man named Cobb who, a few years ago, located on a little scrubby patch of land near that town. Now he is well off; has a fine farm and has raised seventy-five bushels of sweet potatoes on a quarter of an acre of ground. Taking \$1 a bushel as a fair average price, this land yields at the rate of \$300 per acre each year.

It is another illustration of the fact that the soil of Western North Carolina is capable of the highest development, and that the finest agricultural belt in the "State of the tar heels" is the one lying along the Western North Carolina Railway.

As an illustration of the extraordinary intellect of our "brother in black," of North Carolina, it is said that a darkey at Salisbury having heard that Ex-Governor Jarvis had been appointed "Envoy Extraordinary and Minister Plenipotentiary to Brazil," told another darkey that "Gub'nor Jarvis done been appointed *extr'ordinary preacher to the penitentiary of Brazil.*"

"The State Legislature of North Carolina has chartered a company and authorized the building of a new railroad from Shelby via Morganton to Cranberry with a line from Morganton via Lenoir to the Virginia State line in Ashe county, to connect there with the Shenandoah Valley road, now anxiously seeking an outlet in this direction. This would give an interior line from Baltimore this way due South via Shelby, Greenwood, to Augusta and Savannah." This paragraph is floating around among my exchanges, but as yet the railroad has not much chance of being built. The connection would be made with the "Norfolk and Western"—not the Shenandoah Valley—at some point just above Bristol, Tennessee.

The N. C. Association of School Teachers will meet at Black Mountain, on the W. N. C. R. R., June 9th. A finer site for this gathering could not have been chosen, and the 300 ladies and gentlemen who annually meet in order to discuss how to "teach the young ideas" to shoot, will have a nice time. Black Mountain is sixteen miles from Asheville, three miles from Swannanoa tunnel and ten miles from Round Knob, in the midst of splendid mountain views and delightful landscapes. The Mount Mitchell Hotel where the assembly meets is a new building and one of the best finished and best arranged hotels in Western North Carolina, and Mr. Stepp, the genial proprietor, will "make it lively" for everybody.

An exchange says that a new firm under the title of "The Clingman Tobacco Cure Company," with almost unlimited capital, has been organized in Durham, N. C., to manufacture and sell the following preparations of tobacco: the Clingman tobacco cake, (which will simply be a cake of pure tobacco) the Clingman tobacco plaster, the Clingman tobacco liniment and the Clingman tobacco ointment. General Clingman has secured all of the above by trade mark, and he is now one of the company.

Mr. R. G. Pace, Danville, Va., has patented a "Humane Stock Car," the object of which is to afford a means of watering and feeding horses, cattle, hogs, sheep, etc., in transit, without the necessity of going in the car. Railway officials who have examined the device have in every instance endorsed it. Mr. Pace is willing to sell an interest in the patent.

Tift & Roller Chain Belting Co., Columbus, O., have recently furnished a number of large saw and pulp mills with their roller chain for conveyers, drive belts, etc. They are now running full time, and report an increased business.

THE Pope Manufacturing Co., of Boston, have issued their spring catalogue. The book contains 52 pages, is handsomely printed upon fine paper and illustrated with nearly 70 engravings of the Columbia bicycles and tricycles, and sundries for the season just opening.

Gold and Silver Mining in the South.

NEW ORLEANS, April 3d, 1885.

Editor Manufacturers' Record:

During my stay in this city and in attending the Exposition, my mind has been very strongly directed to the relative standing of the Southern States as a bullion-producing section, both past and present, together with the relative standing of each one of them as compared with the others, and the inducements which they now offer to the miner and the capitalist; and on investigation I find that the amount of gold mined in the Southern States from 1840 to 1850, or the time we began to feel the effects of the discovery of gold in California, was as follows:

North Carolina.....	\$6,842,900
Georgia.....	6,048,900
Virginia.....	1,198,500
South Carolina.....	818,100
Tennessee and Alabama.....	263,800

Total amount.....\$15,172,300

To the time from 1850 to 1880 it appears that no official returns are accessible in regard to the amount of precious metals produced by the Southern States.

The census report for the year ending May 31st, 1880, gives us the following figures in regard to the precious metals:

	Gold.	Silver.
North Carolina produced.....	\$118,953	\$140
Georgia.....	81,029	332
South Carolina.....	13,040	50
Virginia.....	9,321	...
Tennessee.....	1,998	...

	IN 1881.	Gold.	Silver.
North Carolina produced.....	\$115,000	...	...
Georgia.....	125,000	...	...
South Carolina.....	35,000	...	...
Virginia.....	10,000	...	...
Tennessee.....	5,000	...	...

	1882.	Gold.	Silver.
North Carolina produced.....	\$190,000	25,000	...
Georgia.....	250,000	...	...
South Carolina.....	25,000	...	...
Virginia.....	15,000	...	...

Average production of gold and silver during the census year per square mile in each of the Southern States:

North Carolina.....	\$ 2.28
Georgia.....	1.36
South Carolina.....	0.43
Virginia.....	0.22
Tennessee.....	0.05
United States.....	43.28

Average production of gold and silver per capita during the census year:

North Carolina.....	\$0.08
Georgia.....	0.05
South Carolina.....	0.01
Virginia.....	0.006
Tennessee.....	0.001

Rank of Southern States in the production of gold and silver during the census year:

North Carolina.....	12th.
Georgia.....	13th.
South Carolina.....	17th.
Virginia.....	19th.
Tennessee.....	21st.

Rank of Southern States in the production of gold and silver per square mile during the census year:

North Carolina.....	12th.
Georgia.....	14th.
South Carolina.....	16th.
Virginia.....	18th.
Tennessee.....	20th.

Rank of Southern States in the production of gold and silver per capita during the census year:

North Carolina.....	14th.
Georgia.....	15th.
South Carolina.....	17th.
Virginia.....	18th.
Tennessee.....	20th.

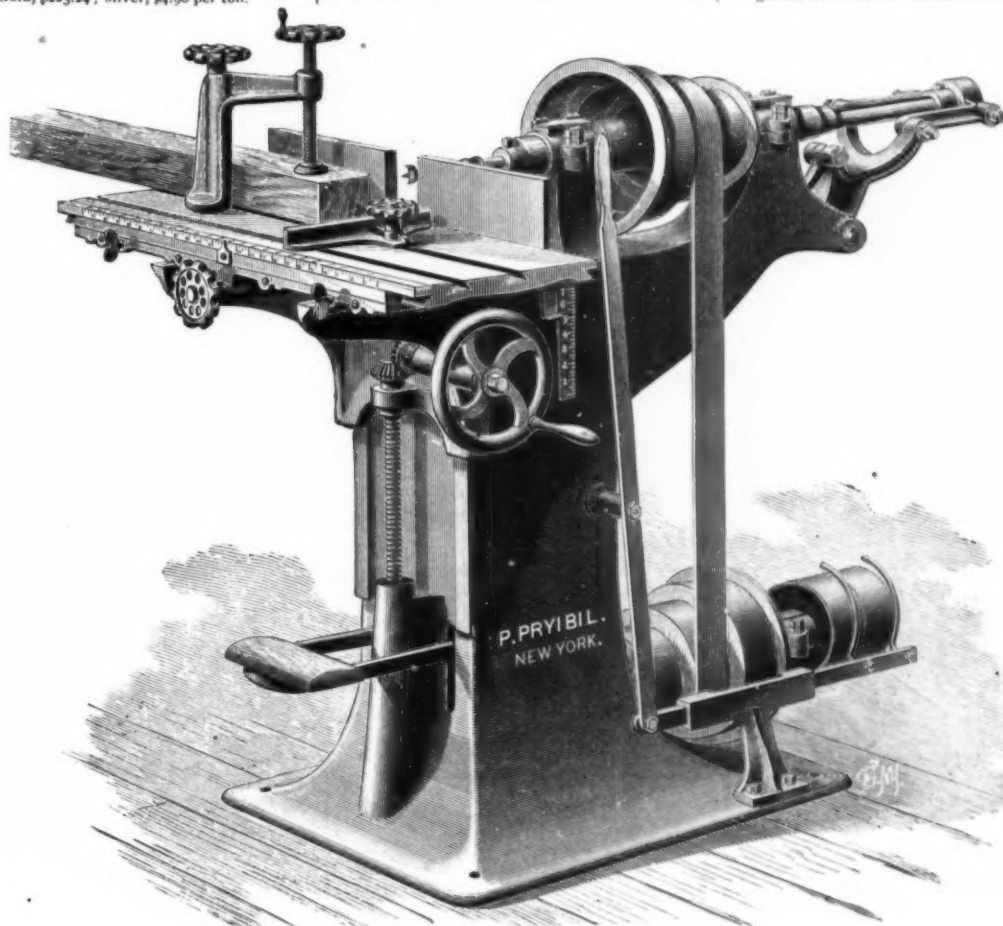
Rank of Southern States in the production of gold and silver in 1882:

Georgia.....	11th.
North Carolina.....	12th.
South Carolina.....	15th.
Virginia.....	16th.

The latest official returns accessible include the first six months of 1883, which are estimated at the same output as the first-half of 1882, which will prove to be much below the actual production, as there has been an unusual activity in gold mining in Georgia, South Carolina and North Carolina, and during this time many discoveries have been made, and new mines opened, and many new improvements made in the modes of mining, and the machinery and plants put in operation which will raise the Southern States in the grade of bullion-producing sections, whilst the Western States and Territories show but little change in this respect, and I think that in consideration of all these improvements and discoveries that it is within the bounds of actual facts to estimate

the output of gold for the last two years to be more than double the rate of what is given officially for 1882. The abundance of cheap labor which can be obtained for from seventy-five cents to a dollar per day, including board, the mildness of the climate, which enables the miner to pursue his labor almost without interruption during the entire year, the cheapness and abundance of all kinds of supplies which can be procured in almost every locality, and the nearness and accessibility of the section to Eastern and Northern markets, when taken into consideration with the immense amount of ores which, although many of them of low grade, yet others vie in value with some of their more noted associates of the far West, as will be shown by the following analyses and descriptions of a few of the ores and mines of the South, prove emphatically that the South is now the most inviting field perhaps in the whole world for the enterprising miner and capitalist:

Auriferous Galena from Stewart's mine, Union county, N. C. Gold, \$46.34; silver, \$6.55 per ton.
Gold ore from Fair's mine, Mecklenburg county, N. C. Gold, \$506.42; silver, \$6.52 per ton.
Gold ore from S. Wilson's mine, Mecklenburg county, N. C. Gold, \$223.24; silver, \$4.90 per ton.



HORIZONTAL BORING MACHINE.

Horizontal Boring Machine.

This machine is adapted to a large variety of work, including rosette cutting and mortising. The latter is done by a cutter, cutting at both end and sides, producing, when the work is moved sideways, a mortise with half round ends.

The spindle is of steel fitted to a steel tube with which it revolves and in which it slides. The wear is thus confined to the tube where it can be easily taken up by the adjustable caps. When spindles slide in the same bearings in which they revolve they become smaller at one part than at another and a perfect adjustment is then impossible. The spindle has a longitudinal movement of six inches, and it is provided with an adjustable gibbed stop collar. The table has a movement of ten inches in the direction of the length of the spindle to enable it to be set close to bits of various lengths and to enable rosette and mortising cutters to be used close to the bearings; it also has a vertical movement of twelve, and a lateral movement of fourteen inches. The latter is

Gold ore from Double Branch mine, Polk county, N. C. Gold, \$23.77 per ton.
Gold ore from Black mines, Mecklenburg county, N. C. \$485.75; silver, \$2.37.
Auriferous copper pyrites, Eureka mines, Randolph county, N. C. Gold, \$46.52 per ton; copper, 4.78 per cent.
Gold ore, Rudisill mine, Charlotte, N. C. Gold, \$214.97; silver, \$0.53.

Haile mine, Lancaster county, S. C., consisting of five distinct veins aggregating one hundred and eighty feet, as follows:

Vein No. 1, fifty feet wide, assay value.....	\$40 per ton.
Vein No. 2, fifty feet wide, assay value.....	12 per ton.
Vein No. 3, thirty feet wide at sixty feet deep, assay value.....	35 per ton.
Vein No. 4, thirty feet wide, surface ore, assay value.....	25 per ton.
Vein No. 5, twenty-five feet wide at 120 feet level, assay value.....	10 per ton.

To which might be added scores of assays as made by the authorities of the United States Mint, and which can be referred to at any time, all go to prove that these mines offer greater inducements to the capitalist than any others in the country. SILEX.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South, cannot find a better medium than the BALTIMORE MANUFACTURERS' RECORD. We are always prepared to furnish proof of our claims as to circulation.

List of Patents

The following Patents were granted to citizens of the Southern States, bearing date April 7, 1885. Reported expressly for this paper by Louis Bagger & Co., Mechanical Experts and Solicitors of Patents, Washington, D. C.

Akins, G. W., Nashville, Tenn. Wheel-plow.....	315,211
Baxter, H., & A. F. Anton, Memphis, Tenn. Wood-moulding machine.....	315,222
Belding, W. R., Eureka Springs, Ark. Spring link.....	315,223
Bell, Wm., Verona, Miss. Railway gate and means for preventing injury to stock or railways.....	314,990
Blaine, S. C., Chattanooga, Tenn. Bolster-spring.....	315,382
Brown, S. H., Leesville, Tex. Indicator for merchandise.....	315,236
Clock, W. W., La Grange, Ga. Oil-mat.....	315,126
Dillon, W. H., Glasgow, Ky. Pump.....	315,257
Fowler, T. J., Birmingham, Ala. Combined cotton sweep, chopper, &c.....	315,400
Fuller, Jefferson, Huntington, W. Va. Car-coupling.....	315,401
Kenly, E. F., Baltimore, Md. Duck-shooting blind.....	315,297
Massey, J. W., Shuqualak, Miss. Power-jack.....	315,309
McAllister, P. W., Baltimore, Md. Eye-glasses.....	315,154

effected through the hand-wheel in front, and its extent can be limited by two adjustable stops provided for the purpose.

The table is also provided with an adjustable square and miter gauge, an adjustable clamp, an iron fence with tapered dove-tail ends for facilitating the application of special wooden fences, and with scales for setting to sizes. All the slides are provided with adjustable gibs and the main bearings with adjustable caps. The height of the treadle is adjustable to enable the operator to set it low when boring short holes, so that he will not have to raise his foot unnecessarily high. The loose pulley is self-oiling and the machine can be driven from above, below, or from either side. To accommodate any possible position of the belt, the belt shifter is fitted to both sides of the machine, so that it can be used on either, and the fork can be turned either up or down.

The self-oiling tight and loose pulleys are 7 inches diameter for 3 inch belt, and should run from 900 to 1,100 revolutions per minute. This machine is manufactured by P. Prybil, manufacturer of wood-working machinery, shafting, pulleys, &c., 461 to 467 West 40th street, New York, who will furnish catalogues of machinery upon application.

McCord, L. A., Clinton, S. C. Rein holder.....	315,311
Mawadny, Albert, New Orleans, La. Fan attachment.....	315,320
O'Connor, Patrick, Mt. Savage, Md. Canal-boat propeller.....	315,159
Perlich, Hermann, Baltimore, Md. Fumigator.....	315,330
Powell, N. A., Lenoir, N. C. Plow.....	315,441
Robinson, G. W., Millview, Fla. Log-turner.....	315,073
Sanders, W. J., Gilmer, Tex. Hearth guard or shield.....	315,345
Tillman, W. A., Grape Vine, Tex. Fence.....	315,088
Walter, C. R. & J. E. Blackburn, Fredericktown, Md. Whiffletree.....	315,362
West, T. S., Alexandria, Va. Paper-box.....	315,454
Wilder, W. M., Franklin, Ga. Cotton-seed planter.....	315,099
Williams, I. C., Auburn, W. Va. Fire-place.....	315,367
Wolfe, H. R., Louisville, Ky. Saw-swage.....	315,104
Woolard, J. H. & J. L., Williamstown, N. C. Combined harrow and cultivator.....	315,106
Wright, C. C., Elkton, Md. Thrill-coupling.....	315,455

LUTHERSVILLE, GA., April 8, 1885.

Editor Manufacturers' Record:

My shingle mill and Mr. J. T. Upshaw's saw mill were burned on the 24th ult., but are nearly rebuilt again. I am running two mills part of the time; cut of each, 3,000 feet per day. Timber scarce, and lumber at mill \$1 per 100 feet. Demand now moderate. ALLEN CHANDLER.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

ALABAMA.

The Pratt Coal & Iron Co., of Birmingham, Ala., previously reported as intending to build two new furnaces, have given out contract for part of the machinery needed.

The Tecumseh Iron Co., Tecumseh, Ala., propose to alter their furnace, so as to use coke instead of charcoal in making iron.

The County Commissioners, Birmingham, Ala., have ordered plans to be prepared and reported in May for a new jail to be built in that city.

The Mabel Mining Co. has been organized at Warrior, Ala., with T. M. Davidson, president, and L. K. Moss, secretary, to mine coal and make coke. Capital stock \$50,000.

The Elyton Land Co., Birmingham, Ala., will build a 6-mile street railroad.

W. E. Michael, Demopolis, Ala., will build a saw mill.

The Sloss Furnace Co., Birmingham, Ala., intend to build another furnace as soon as the iron trade improves.

Figh & Williams have received the contract for enlarging the Statehouse at Montgomery, Ala., for \$20,000.

ARKANSAS.

Capt. Alexander, Washington, Ark., is building a grist and planing mill.

The Helena Manufacturing & Laundry Co., Helena, Ark., has been incorporated (capital \$4,000) by J. P. Moore, S. H. Horner and others.

FLORIDA.

A company is being organized in Ocala, Fla., to build water works.

A brick yard is to be established in Bridgeport, Fla., and machinery is wanted. Address Mitchell Renz.

W. A. Macduff, Jacksonville, Fla., will erect a large warehouse.

GEORGIA.

Samuel Morgan, T. F. Howell, M. Graham and A. W. Walton have organized, at Rome, Ga., the Rome Compress Company, capital \$50,000.

Jas. M. Shepard, Stone Mountain, Ga., will build a flour mill to cost about \$4,500.

Pope Miller, Barnesville, Ga., has added a grist mill to his saw mill.

The Swift Manufacturing Co., Columbus, Ga., will erect an additional building for their cotton mill to be used in the manufacture of bed spreads.

Webb's Flour Mill, Gainesville, Ga., is nearly completed.

Atlanta, Ga., will build a \$12,000 school house.

It is reported that Geo. P. Swift, Columbus, Ga., will erect a large hotel.

J. L. Jarrell, Reidsville, Ga., will rebuild his flour mill lately burned.

KENTUCKY.

Geo. T. Thompson, reported last week as building a flour mill at Carrollton, Ky., should have been at Warsaw, Ky., a small town near the former place.

It stated that C. P. Huntington and others will build a large Union depot at Louisville, Ky.

The Louisville & Nashville Railroad Company, it is reported, will immediately build two machine shops at Tenth and Zane streets, Louisville, Ky. Estimated cost \$60,000.

James H. Thorpe, W. G. Morris, R. L. Mannen and G. S. Bruce have organized at Covington, Ky., the Brunswick Stone and Marble Company, capital \$100,000.

The Eureka Gas Company, organized in New York, has submitted an offer to the Mayor & City Council, of Lexington, Ky., to build gas works in that city provided they are granted certain privileges.

The Champion Ice Company, Covington, Ky., are putting in a 50 ton ice machine.

The County Commissioners, Greenup, Ky., have decided to build two new iron bridges.

John Clark, Georgetown, Ky., has established a planing mill.

The machine shop of H. C. Kromwell, Cynthiana, Ky., was badly damaged April 9 by boiler explosion.

J. R. Osborne & Son, Owensboro, Ky., will enlarge their planing mill and put up a 2-story addition.

H. B. Lyon, Eddyville, Ky., and others have organized a company to establish extensive lime works near there.

It is reported that Archie Stewart, Covington, Ky., intends to organize an Edison electric light company.

Peter de Tangle, Charles Fisher, and Simon I. Loventhal have organized at Covington, Ky., the Cincinnati Forge & Iron Co., capital \$50,000, to manufacture iron, steel, &c.

Horton & Co., of Cincinnati, Ohio, manufacturers of firemen's supplies, &c., contemplate removing their factory to Lexington, Ky.

LOUISIANA.

A company is to be organized in New Orleans, La., as the Louisiana Terra Cotta Lumber Co., to manufacture terra cotta lumber.

MARYLAND.

The Cremation Cemetery Company, of Baltimore, has been incorporated by John W. Hall, Frank H. Hambleton, Charles Weber, Jr., Benjamin F. Horwitz, Henry G. Hilken, Louis Muller, Owen A. Gill, Charles Glaser, J. Alexander Preston, John W. Misdendorf, Gustavus W. Lehman and John R. Rennous, to build a crematory. Capital stock \$15,000.

G. Cassard & Co., Baltimore, whose large pork packing house and lard refinery was lately burned, as reported, (loss about \$70,000) are now rebuilding.

B. A. Betts, Chewsville, Md., will build a grain elevator.

The buildings of the St. Joseph's Academy, Emmitsburg, Md., lately burned, (loss about \$50,000) will be rebuilt.

The Baltimore Baling Press Company, capital \$20,000, has been organized in Baltimore by Theodore G. Austin, Benjamin F. Smith, N. C. Unduch, John P. Ammidon and John B. Ramsay, to manufacture cotton and hay presses.

L. P. Haslup, carriage manufacturer, Baltimore, will erect a 4-story factory, 30x33 feet.

MISSISSIPPI.

C. C. McKinnon, Aberdeen, Miss., previously reported as intending with others to build a cotton seed oil mill, has organized a stock company for that purpose. S. H. Berg has received the contract for erecting the buildings.

The report that efforts were being made to build a cotton compress at Memphis, was an error; it should have been at Yazoo City, Miss., the Illinois Central Railroad, which will build a line between Yazoo City and Memphis, intending, it is said, to locate a compress at the former place and not at the latter.

The Artesia, Starkville & Grenada Railroad Co. has been organized at Starkville, Miss., with L. D. McDowell, of that place, president. Object is to build a road from Grenada to Starkville.

NORTH CAROLINA.

Spurgeon & Hayworth, Abbott's Creek, N. C., have built a flour and saw mill.

J. M. Worth, Worthville, N. C., has been buying machinery for his cotton mill.

B. H. Cozart, Oxford, N. C., will erect a large brick tobacco warehouse.

The address of J. A. Sugg, reported last week as building a spool and shuttle factory, should be Greenville, N. C., and not Greenville, S. C.

Shelton Sicheloff, Bethany, N. C., has completed his flour mill.

Martin county, N. C., will build a new court house. Board of County Commissioners, Williamston, N. C., can give particulars.

John D. Waddell & Wagoner will establish a saw and grist mill at Salem Chapel, N. C.; have purchased part of machinery.

The Atlantic, Tennessee & Ohio Railroad is to be extended from Statesville, N. C., to Taylorsville.

At Forest City, N. C., work has been commenced on the new railroad which is to connect Marion, N. C., with Georgetown and Charleston, S. C. The road is to be built between Marion N. C., and Gaffney City, S. C., by the Massachusetts & Southern Construction Company. From Gaffney City the road will run to Chester, thence one branch will run to Georgetown and another branch to Charleston.

TENNESSEE.

A company has been organized in Nashville, Tenn., for the purpose of manufacturing and introducing the Automatic Daylight Gas Machine. The members of the company are H. W. Buttorff, John D. Anderson, Jas. G. Aydelott, John O. Treaner, H. B. Anderson, W. H. Johns, W. F. Foster, W. S. Johns, W. H. Berry, Geo. R. Buchanan.

J. T. Kimsey, Tullahoma, Tenn., expects to build an organ factory soon.

The Citizen's Gas Company, Knoxville, Tenn., previously reported as organized, have awarded the contract for their pipe and will soon commence the construction of their works.

A new gas company will probably be organized in Memphis, Tenn.

Eskin & Griffiths, Chattanooga, Tenn., intend to build a grain elevator.

P. F. Crook, Concord, Tenn., has organized a company to mine mica.

The County Court, Newbern, Tenn., have appropriated \$14,000 to build an iron bridge.

J. W. Reid, Denmark, Tenn., will add saw mill machinery to his grist mill.

C. T. Brause, J. C. Nelson, C. Brause, W. J. Hanley and E. E. Young have organized the Emery River Coal & Coke Co. to mine coal, make coke, etc. Address Houkville, Tenn.

J. H. Randolph has received contract for building a \$10,000 court house at Newport, Tenn.

The Southern Machine Co., Shelbyville, Tenn., previously reported, have capital stock of \$18,000. The cost of their works is about \$10,000.

The Sherman Manufacturing Company, Jackson, Tenn., are building an additional machine shop.

The foundry and machine shop buildings now being erected in Johnston City, Tenn., are about completed and the machinery is being put in. T. A. Watson can give particulars.

A saw mill is being put up at Garland, Tenn. Anthony & Wright can give particulars.

A saw mill is being built at Rialto, Tenn.

The Knoxville Woolen Mills, Knoxville, Tenn., have put their machinery in position and are nearly ready to start up.

A company is being organized in Tennessee as the Knoxville, Sevierville and Big Pigeon Railroad.

John Ingram of Vanceburg, Ky., contemplates establishing a plow factory in Chattanooga, Tenn.

VIRGINIA.

The Roanoke Navigation and Water Power Company, chartered at last session of North Carolina legislature, has been organized in Petersburg, Va., with S. P. Arrington, of that city, secretary, and J. D. Cameron, of Pennsylvania, president. Directors: J. D. Cameron, Wm. Mahone, S. P. Arrington, and others. Object is to develop water power for factories; capital stock \$500,000.

W. N. Jones & Co., Petersburg, Va., whose bark and sumac mill was lately burned, will rebuild at once, using water power.

Wm. H. Marshall & C. C. Proctor have purchased the River-Bank Flour Mill, near Harrisonburg, Va., for \$5,500, and will overhaul and repair it and put in operation.

B. F. Camp, of Philadelphia, has leased the Loudon stone quarry, near Leesburg, Va., and will work it on a large scale.

Echols & Sherwood have leased an iron ore mine near Blue Ridge Springs, Va., and will work it.

WEST VIRGINIA.

J. P. Clifton & Son, Weston, W. Va., whose woolen mill was previously reported burned, (loss \$20,000) will probably rebuild shortly.

The Lewiston Mining Co., capital \$5,000, has been organized at Charleston, W. Va., by John Anderson, Ella C. Anderson and others, to mine coal, make coke, &c.

L. A. Carr & Co., Buffalo, W. Va., have purchased a flour mill in Charleston, W. Va., which they will repair and put in operation.

BURNED.

Linnville's Saw Mill, Fruitland Park, Fla.; loss \$2,500. Will probably be rebuilt.

Tobacco factory of George W. Nation, Glenville, Ky.; loss \$4,500.

Saw mill of James H. Young, Pocomoke City, Md.

Flour mill of Joseph Harp near Middletown, Md.; Loss \$6,000

Flour mill of Spencer, Thayer & Co., Tabernacle, N. C.

Saw mill of J. B. King, near Buckeye, Tenn.

Sweetwater Flouring Mills, Sweetwater, Tenn.; loss \$30,000. The proprietors will probably rebuild either in same town or elsewhere.

Woolen and grist mill of Marcellus Rudasill, Browntown, Va. Loss \$6,000.

LOCKWOOD, GREENE & CO. MILL ENGINEERS

Office, 65 Westminster St., Providence, R. I.
Carefully prepared plans, specifications and estimates furnished for the construction, equipment and organization of new mills and the revision and improvement of old.

The New Pratt Furnaces.

Our correspondent at Birmingham, Ala., writes as follows: As printed in the local papers, the facts are that the Pratt Coal & Iron Co. do intend to build two new coke furnaces for iron, and that the engines have been ordered from the Linn Iron Works of this place. Their idea is to secure a home consumption of large quantities of coal.

A \$50,000 Coal Company.

WARRIOR, ALA., April 13, 1885.
Editor Manufacturers' Record:

The Mabel Mining Co. was organized last Saturday at this place with a capital stock of \$50,000. T. M. Davidson is president, L. K. Moss secretary. Headquarters at Warrior, Alabama. Will commence work at once, mining coal and making coke.

S. C. DAVIDSON.

A Big Company.

PETERSBURG, April 11, 1885.

The Roanoke Navigation and Water Power Company has been organized under a charter granted by the last legislature of North Carolina. Senator J. D. Cameron, Pennsylvania, is president, and Mr. S. P. Arrington, of Petersburg, secretary and treasurer. The directors of the company are Senators J. D. Cameron, of Pennsylvania, and Wm. Mahone, of Petersburg, and Messrs. S. P. Arrington, R. T. Arrington, of Petersburg, and Mr. T. W. Mason, of Northampton county, N. C. The capital stock of the company is fixed at \$500,000, but the stockholders have the right to increase it to any amount they may see fit. The principal office will be in this city, but the company will also be represented in Weldon. Some time during the summer a survey will be made of the entire canal and sites suitable for factories located. As soon as practicable, inducements will be held out to capitalists and manufacturers for the erection of factories of every description. It is thought by many to be the most valuable power in the South, and possibly the United States. It will take a year or more to develop fully what we have. The canal is 9 miles long with many sites, and said to be 18,000 horse power. Original cost of property reported to be about \$800,000. Has been neglected for many years and will require heavy expense to develop it fully.

S. P. ARRINGTON,
Secretary and Treasurer.

Cooperage Factory.

MEMPHIS, TENN., April 10, 1885.

Editor Manufacturers' Record:
Our stockholders at a meeting held April 3, decided to increase our capital stock \$50,000, in order to meet the growing demand for our product. As our works already have a large capacity we do not expect to add very much more machinery.

J. L. WELLFORD,
Secretary and Treasurer.

A Chair Factory.

FELL CITY, IND., April 9, 1885.

Editor Manufacturers' Record:
We will open a branch house at Dallas, Texas, by first or middle of May. Will have raw material shipped from Fell City for the first season and contemplate moving our present factory to Dallas within 12 months.

COOMBS, HARTMAN & CO.

CHEWSVILLE, MD., April 14th, 1885.

Editor Manufacturers' Record:
I am building an elevator; capacity about 10,000 bushels; size of building, 30x40 feet; 30 feet height to the square. We are working at the foundation now and expect to have the same complete about the 1st of July.

B. A. BETTS.

McEnergy Quarry.

ALEXANDRIA, LA., April 11, 1885.

Editor Manufacturers' Record:

The McEnergy Quarry is situated upon a track of land consisting of 1,400 acres intersected by the Texas & Pacific Railroad, immediately upon which the present quarry is now being worked.

The abundance of the stone which extends to the river front, and being a continuation of the same deposit that passes throughout the entire tract, has induced the owners to commence quarrying upon the river front, and there to establish a permanent work.

This tract of land is situated in the Parish of Rapids, State of Louisiana, twenty four miles above the town of Alexandria, and is about midway between New Orleans and Marshall, Texas. It is the only known deposit of stone of a character suitable for all mechanical purposes that exists in the State, hence the advantages will be much in its favor in furnishing the Southern market.

The stone is specially suited for flagging and street purposes, and has been used to some extent by the Texas & Pacific Railroad as ballast.

It has been submitted to a thorough analysis by a special and practical geologist, who pronounces it the best quality of sand stone, having a specific gravity of 165 pounds to the foot, resisting heat and cold equally as well if not better than granite. It is suitable for all building purposes, readily susceptible to the chisel, and capable of receiving a high polish.

The quarries located are yet far from being fully developed, as the owners have had some trouble and delay in procuring experienced workmen. They are now building houses and making all necessary improvements, in order to facilitate the work, and will in a short time be fully prepared to meet all demands.

The present head quarters of the company are at Alexandria, La.

A Fine Machine Shop.

JOHNSON CITY, TENN., April 9, 1885.

Editor Manufacturers' Record:

Buildings for foundry and machine works at Johnson city are about completed; engine and boiler are being put in, and machinery is arriving. Expect to start up within forty days. Machine shop, two stories, 50x100; foundry, &c., 90x125.

T. A. MATSON.

GEORGETOWN, KY., April 7, 1885

Editor Manufacturers' Record:

John Clark, for many years engaged in carriage manufacturing here, has converted his establishment into a planing mill, which began operations to-day. The mill is fitted up with all the modern appliances, and is first-class in every particular. Mr. Clark is a thorough mechanic, and will doubtless succeed well in the new departure. This is the second establishment of the kind started in this city during the last six months. Thomas Story has started a large henney in this city with brilliant prospects of success. Mr. J. H. Kutner has also engaged extensively in the same business, and if competition is the life of trade, they may expect large returns on their investment. This is a new business in this locality. One of the largest queensware establishments in Central Kentucky has just been opened here by W. S. Elgin & Co. The well-known character of the firm is a guarantee of its success.

L. A. SLADE.

TUSCUMBIA, ALA., April 10, 1885.

Editor Manufacturers' Record:

There is talk of Memphis & Charleston Railroad building their shops here, this being near the center of their line and a very healthy country. They have never rebuilt their shops at Memphis and I suppose they will have to build somewhere soon.

A. S. STANLEY.

New Saw Mills.

CHARLESTON, W. VA., April 6, 1885.

Editor Manufacturers' Record:

I have sold a saw mill to W. J. Smith & Bro., Milton, W. Va.; a new 12x20 Mansfield engine and tubular boiler to C. M. Huffman, for flouring mill at Little Sandy, Kanawha county, W. Va., started up last month; to Sill & Meeker 10x16 Mansfield Detached Portable Engine with locomotive, boiler and mammoth circular saw mill, to be located at Jarrett's Ford, on Elk river, 12 miles above Charleston; will start about April 15th.

O. H. MICHAELSON.

KNOXVILLE, TENN., April 8, 1885.

Editor Manufacturers' Record:

It is reported that a partnership has been formed between P. F. Crook, C. S. Crook and Thos. Calloway, of Concord, Tenn., under the firm name of P. F. Crook & Co., for the purpose of developing and working the mica mines in Fannin county, Georgia.

A cigar factory is about to be established at this place by H. Levy & Bro., of Coldwater, Mich.

H. N. SEXTON, JR.

Machinery Wanted.

BRIDGEPORT, PUTNAM CO., FLA.

April 9, 1885.

Editor Manufacturers' Record:

There is to be a brick yard started here and some machinery will be wanted; makers will please send catalogues and lowest prices with best terms. John T. Carey has failed to put in the saw mill here, so there is an opening for a good live man at that business.

MITCHELL RENZ.

WARSAW, KY., April 12, 1885.

Editor Manufacturers' Record:

I am at present building a new full roller flouring mill of 50 barrels capacity, and expect to have the model small roller mill of the country; building of brick and stone, 30x50 feet; engine room 18x40 feet; main building 3 stories high; metal roof, &c.

GEO. F. THOMPSON.

New Enterprises at Mt. Airy.

MT. AIRY, N. C., April 9, 1885.

Editor Manufacturers' Record:

Booker, Belton & Co. have built a lumber mill and sash, door and box factory. Sparger Bros., McKenny Bros. and J. P. Rawley have each built large tobacco factories.

OWENSBORO, KY., April 13, 1885.

Editor Manufacturers' Record:

We will build a two-story addition to our planing mill in a few weeks; size 30x60 feet, and expect to roof with iron roofing; will also put up a fire-proof boiler house.

J. R. OSBORNE & SON.

More Industries Starting Up.

READING, PA., April 14.—The Philadelphia Bridge Works, at Pottstown, which were working with a largely decreased force, has received a contract involving the construction of 700,000 pounds of manufactured iron for the new steel works at Pottstown, which are to be the largest of the kind in the Schuylkill valley. With the starting up in the new nail works of Ellis, Lessig & Co., Pottstown will experience a revival that has not been felt for 18 months.

MOUNT CARMEL, PA., April 14.—After a suspension of 14 weeks work was resumed at the Pennsylvania colliery this morning. The mine gives employment to 800 men, whose earnings annually approximate \$350,000. During the long idleness the employees have been cared for by the business men of Mount Carmel, who are jubilant over the prospects of a speedy return of the amount they have expended in the support of the miners' families.

Law Department.

Edited by B. HOWARD HAMAN, Attorney at Law
Baltimore, Md.

It is the province of this Department to reply to enquiries that may be made by our patrons respecting the legal aspects of any matter that may arise in their business. Any questions as to doubtful points of law will be answered without charge in this column. All questions submitted must be accompanied by the name and address of the sender, not however, for publication. Letters should be addressed, Editor Law Department, MANUFACTURERS' RECORD.

LYNCHBURG, VA., April 8, 1885.

Editor Law Department,

Manufacturers' Record:

Dear Sir—Does a citizen who mails a letter to a lottery dealer ordering lottery tickets and enclosing the funds to pay for the them, thereby commit an offense against the United States?

Reply—No. The statute prohibiting the use of the mails for such purposes applies only to lottery dealers and others using the mails for purposes of deception.

BALTIMORE, April 13th, 1885.

Dear Sir—A few days ago a man offered to sell me a machine for a certain price and agreed to keep the offer open until 4 o'clock the following day. I called upon him before that hour the next day and accepted his offer, when he informed me that he had already disposed of the machine. Can I not recover against him for breach of contract?

Reply—According to your own statement of your case, no. The contract, the breach of which you complain of, was to keep the offer open until the following day at 4 o'clock. For this there was no consideration; and he cannot be held to such an agreement. Had you paid him anything to keep the offer open until the specified time, the case would have been different.

CUMBERLAND, MD., April 10, 1885.

Dear Sir—What restriction, if any, exists in the State of Maryland upon the right of a corporation to acquire real estate?

Reply—The answer to your question is to be found in Article 40, Section 48 of the Revised Code, which empowers corporations to hold and enjoy as much property, real, personal and mixed, as "may be necessary or proper to enable said corporation to carry on the operations or fulfill the purpose named in its certificate of incorporation."

BALTIMORE, MD., April 10, 1885.

Dear Sir—I hold the promissory note of a citizen of Maryland, which is now barred by the Statute of Limitations, being over three years due. My note however is under six years. Will the fact that my claim is barred here prevent me from issuing a foreign attachment in Pennsylvania, where my debtor has assets, and where I am informed the period of limitation is six years?

Reply—No. The question of limitation is a matter of evidence and applies only to the former when suit is brought. The Pennsylvania limitation law would govern in this case.

THE Magazine of Art for May is a gala number. It is adorned with five full page illustrations, besides smaller ones on almost every page. The frontispiece is a study of a head, a fac-simile in color, from the original by Sir Thomas Lawrence, in the British Museum. The other page pictures are "The Petition," from the original by Josselin de Jong, "The Deben above Woodbridge," by Lance Speed, "The Head of Orpheus," from the painting by Gustave Moreau, in the Luxembourg gallery, and "David" by the same artist. "East Suffolk Memories," a charming descriptive sketch by Mr. Sidney Colvin, illustrated by Mr. Lance Speed, opens the number and is followed by a just and appreciative biographical sketch of that much discussed French painter Gustave Moreau, by Claude Phillips. "Pictures of Fence," a bright account of the swordsmen's art, by David Hannay, is especially commended to the consideration of that growing organization of New York City, the Fencing Club, which will be sure to admire the curious cuts that illustrate the mysteries of "Carte and Tierce." "The Art of Periclean Athens" is dealt of by L. R. Farnell, while Richard Heath continues his amusing studies of the "Fashions in Waists."—Cassell & Company, Limited, New York. \$3.50 a year.

Changing the Gauge.

Capt. J. W. Craig, of the Charleston and Savannah Railway, is in the city and will leave to-night for Atlanta and the West, visiting Cincinnati, Chicago and other Western centres, with a view to inspecting the various means and methods adopted by the leading railroad lines relative to a change of their track gauge.

The management of the various railroads in the South are contemplating the advisability of making a change in the gauge of the roads during the coming summer. The present gauge of most of the railroads south of Wilmington is five feet. When the change is made it is proposed to adopt a gauge of four feet eight and a half inches, which is the standard gauge at the North and West. The five-foot gauge at present extends as far north as Wilmington, N. C.; Danville, Va.; Cincinnati, O.; and points in Illinois. In the shipment of freight, North or South, this difference in gauge necessitates a transfer of cars at those points where the gauge is changed, and in the movement of passenger trains the trucks of each coach have to be changed according to the grade of the road. The object in adopting the standard gauge is to do away with the cost and inconvenience of changing the trucks and to expedite the movement of freight.

There are, in round numbers, 130,000 miles of railway in the United States, embracing as many as 18 different gauges, ranging from two feet up to six feet. Four hundred and thirty of the roads have a four-foot eight and a one-half inch gauge, 118 have a three-foot gauge, 78 a five-foot gauge and 54 have a four-foot nine inch gauge. The five-foot gauge extends over about 14,000 miles of railway, and is confined mostly to the Southern railroads. The extent and importance, therefore, of the movement to adopt the standard gauge is very considerable.

It is understood that the Louisville and Nashville Railroad will make the change during the year and the Western and Atlantic will follow. The gauge on these roads is also what is known as the broad gauge. It is proposed to change it also to the standard gauge of four feet eight and a half inches, or three and a half inches narrower than at present. The work of changing the gauge is extremely interesting. A force of men will be put along the roads sufficient to make the change in the shortest possible time. One rail only will be moved, and the rails will not have to be disjointed. In that way, aided by special machinery for drawing the spikes, the work will proceed very rapidly. The advantages to grow out of the change on the Louisville and Nashville are numerous. The standard gauge is in use on all the roads north of the Ohio river. Freight will come all the way from the North and West without the change of trucks or transferring of goods. Under the present arrangement trucks are changed at the Ohio river, and the delay thus occasioned frequently causes freight blockades.

The changes on the Charleston and Savannah Railway and the entire Plant system will be made, probably, some time in August, and will be done in two days. The Charleston and Savannah will be changed the first day, and the Savannah, Florida and Western, from Savannah to Jacksonville, the second day.

Capt. Craig will be absent about a month, and upon his return will submit a report, embodying the results of his observations. Arrangements will then be made to change the gauge at as early a day as possible which will probably not be earlier than August. The rolling stock is now being built, whenever new cars or locomotives are ordered, with a view to the change. The locomotives which have been placed on the road during the past year were all built so that with very slight changes occupying but a few hours time their gauges might be altered to conform to that adopted by the road. About half an hour is now consumed in changing trucks at Wilmington on every through Pullman car to the North, and about ten minutes to every freight car. This delay will be obviated by the adoption of the standard gauge, and a quicker schedule will be obtained.—Savannah News.

Stevens' New "Exact" Surface Gauge.

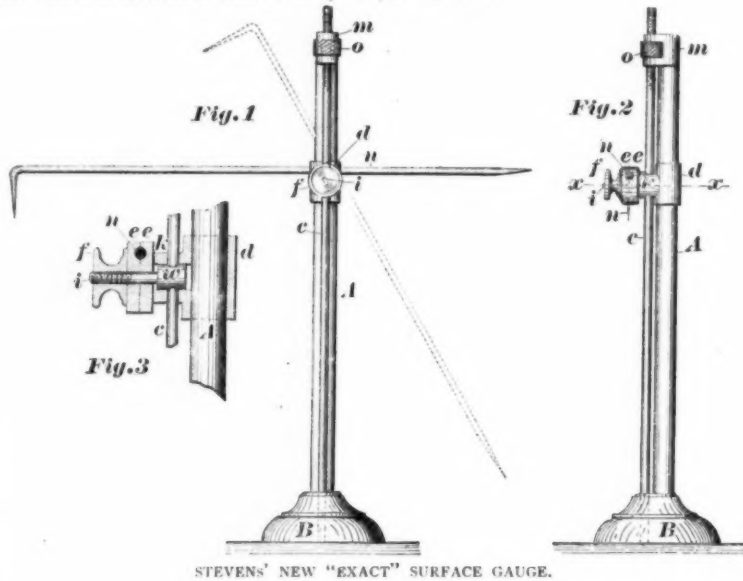
This gauge is claimed to be superior to all others in its quick and fine adjusting powers, and especially in the grasp of its pointer. This, tightening on to one of the rods, and moving only with it instead of sliding upon it as others do, is held perfectly firm in all of its adjustments.

In this tool the post *A* is rigidly fastened to the base *B* in the usual manner. At the top of the post is the nut guide *m*, for nut *O*. The adjusting rod *c* is guided at the top in a hole through *m*, and at the bottom in a hole in the base *B*. By means of the nut *O* the rod and attached parts can be adjusted vertically. The support *d* is made with a branch *k*, through which the rod *c* passes. This branch is recessed to receive the cylin-

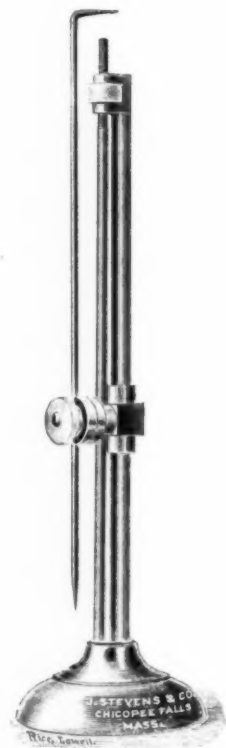
ent to those accustomed to use such tools. By having a hole drilled in the base, it is also adapted to a Depth Gauge and various other purposes.

Small size.—The basis is of cast iron, round, and turned true with the upright spindle. The total height is eight inches, and will scratch 8 inches sideways and 13 inches high. The cast steel needle is pointed on each end, one of which is bent to a right angle. All parts are polished and accurately fitted. Large size.—Same, only weight is two pounds, and arm will scratch 10½ inches sideways, and 18 inches high. These points, together with its simplicity, as shown by the cut, make it a most desirable tool for practical mechanics.

These surface gauges are made by J. Stevens & Co., (P. O. Box 153,) Chicopee Falls, Mass.



STEVENS' NEW "EXACT" SURFACE GAUGE.



STEVENS' NEW "EXACT" SURFACE GAUGE.

dric head *w*, of clamp screw *i*. The rod *c* passes through head *w* and branch *k*. The pointer *n* is held between two clamps *e, e*, as clearly represented. This permits of turning the pointer and clamps on the screw *i*, and of binding the whole by means of nut *f*.

It will be understood that the mechanism carrying the pointer can, when the nut *f* is loosed, be readily moved up or down the post, that when the nut *f* is tightened, it clamps this mechanism to the rod *c*, but that by turning nut *O*, the pointer can be adjusted a short distance up or down to bring it to the exact position required, after it is otherwise securely clamped. The advantages of providing for this adjustment will be appar-

Literary Notices.

The editions of *The Century Magazine* are now so large that it has become necessary either to go to press at an earlier date or to postpone the day of issue. The latter alternative has been accepted. The April number, the edition of which was 225,000, was delayed until the 25th of March. The May number—edition, 250,000—will be issued on the 1st day of May, thus inaugurating with the first number of the thirtieth volume a change which has long been considered desirable by the publishers, and which it is believed will be heartily commended by the public. Future numbers of *The Century Magazine* will be issued on the first day of the month of which each bears date.

WATCH AND CLOCK MAKING, by David Glasgow. Cassell & Co., limited, New York, publishers.

This is the latest volume in the series of "Manuals of Technology" published by Messrs. Cassell & Co., and is of the same high order of merit as those that have preceded it. It is illustrated with 69 diagrams of watch and clock movements and is intended not only as a text-book for technical classes, but is designed also as a book of reference for the practical workman.

BIOGRAPHICAL DIRECTORY OF THE RAILWAY OFFICIALS OF AMERICA. Railway Age Publishing Company, Chicago, publishers.

This volume of nearly 300 pages contains an alphabetical list of the general and division officers of all railways on the American Continent, with a record of their railway service. It is a most excellent work that will doubtless meet with ready sale, as it gives much information that is constantly needed.

T. A. PERRY, of Plymouth, N. C., advertises in this issue the "Plymouth Iron Works" for sale. These works are located in a rapidly-developing State where the manufacturing interests are steadily increasing, and where machinery of all kinds is in demand. The property can be purchased to good advantage as to price and time of payments. Descriptive circulars will be sent upon application to Mr. Perry.

National Commercial Convention of 1885.

To be Held at Atlanta, Georgia, May 19, 20 and 21.

CHAMBER OF THE EXECUTIVE COMMITTEE, ATLANTA, GA., April 4, 1885.

In view of the unsettled condition of the finance and commerce of our whole country, and in obedience to suggestions received from centers of trade, labor and production in the East, West and South, that some united effort should be made to prevent the business affairs of the people from suffering the evils of further depression and stagnation; in pursuance of the views of some of the ablest financiers in this and other sections of the Union, and that the most representative business men of the whole country may have the opportunity to confer together and consider the most effective means to better the business interest of the country, the citizens of Atlanta have determined to invite delegates to a National Commercial convention to assemble in this city on the 19th of May next.

This movement has already been commended by many of the wisest and most conservative leaders in commerce, finance and transportation throughout the country with whom we have been able to consult. We believe that a National convention whose representation is confined rigidly to those who are active and experienced in the business affairs of the people at large, and in which the discussions will proceed upon the intelligent, non-political and practical principles of trade, exchange and traffic as pursued in the United States, will not only command the attention and sympathy of the country, but will give direction to public opinion in ways that will make it commanding upon national legislation.

The assemblage will be one in which the representatives of the several sections of the Union can best be informed of the controlling interests and demands of their respective constituencies, and in which the means of best harmonizing the rights and complaints of all may be intelligently agreed upon and recommended.

The time, the interim between the inauguration of a new administration of national affairs, and before the meeting of a newly constituted Congress, and while there are pending before the authorities and people of the country important propositions for treaties affecting the foreign relations and commerce of this government with other countries, will be most opportune for a full and representative business discussion of these important questions of our near future. Our domestic monetary and commercial relations are also the subjects of important pending legislation. Thus, the subjects that will be presented for the consideration of the convention cannot fail to commend themselves to the attention and study of all thoughtful business men throughout the Union.

To the end, therefore, that the largest number of communities in the nation may have representation in this convention, and its current suggestions and results, the committee desire that all corporate towns and cities, and commercial bodies therein, that may be entitled to representation as herein-after stated, shall select delegates of such character and ability in commercial affairs as will add force to and obtain respect for deliberations and decisions of the convention.

Our object in proposing and organizing this important meeting, is to have it result in the largest possible betterment of the business affairs of the whole people of the United States. In this endeavor, we ask the hearty co-operation of every business man and capitalist throughout the country.

Atlanta, as is well known, is a railway center easy of access from all parts of the country. Her hotels and facilities for entertaining large numbers of people, are unsurpassed. The month of May is one of the

most delightful of the whole year in this climate.

At a recent meeting of the National Association of Railroad Passenger Agents, held in New Orleans, the matter of rates was presented and referred to the Southern Association, which meets on the 8th of April. It is understood that the rates to the convention will not exceed one half fare, and probably will be much less. Information with regard to this matter will be furnished at an early day. It is the purpose of the committee to arrange as far as possible to give the delegates, on the two days of the week after the adjournment of the convention, excursions to places of interest and importance. The Georgia Pacific Railroad Company has already volunteered the free use of a train to take delegates to the coal and iron fields of Georgia and Alabama.

PROGRAMME.

First. The convention will be composed of delegates to be selected, as follows: Every local body organized for general commercial, and not for special private purposes, shall be entitled in this convention to the following representation: Each association having fifty members or less, shall be entitled to one delegate; associations having more than fifty members, shall have one other delegate for each additional fifty members, to be appointed by the association. Any city or town of two thousand inhabitants not having an organized body as above shall be entitled to one delegate, and towns of over two thousand inhabitants shall have one other delegate for every additional five thousand inhabitants. Delegates to be appointed by the mayor or chief magistrate.

The Governors of each State shall be eligible as delegates, and each State shall be entitled to two additional delegates at large, to be appointed by the Governor.

Second. There are to be eight national delegates, to be selected by the executive committee.

Third. All delegates shall present credentials under seal from their respective constituencies; said credentials shall certify the number of delegates to which the constituency is entitled.

Fourth. The subjects to be considered shall be:

1st. Commercial and reciprocity treaties between the United States and foreign countries.

2d. A national bankrupt law.

3d. The compulsory coinage of silver.

4th. Railway transportation.

5th. Such other questions touching national financial and commercial interests, as the Convention may deem proper for discussion and action.

Adjustable Dado or Grooving Head.

The accompanying illustration shows a patented dado or grooving head, which, while it is very simple, possesses most excellent features as can readily be seen by examining the cut. It will readily commend itself to wood-workers. It consists of two composition flanges provided with adjustable scoring knives, which need be moved, however, only to compensate for wear; and adjustable and interchangeable routing knives of any desired widths from 5-16 to 1½ inches, corresponding to the widths of grooves to be cut, and which can be easily and quickly changed. The work done by these heads is equal in quantity and quality to that done by those of the common construction.

When set for a 5-16 groove they take up 1½ inches room on the arbor, and for wider grooves as much more room as the groove is wider than 5-16 of an inch.

If you are not already a subscriber to the BALTIMORE MANUFACTURERS' RECORD, send us \$3 and you will receive it regularly for one year, or six months for \$1.50.

Jellico Coal.

A Discovery That Changed the Characteristics of the East Tennessee Trade.

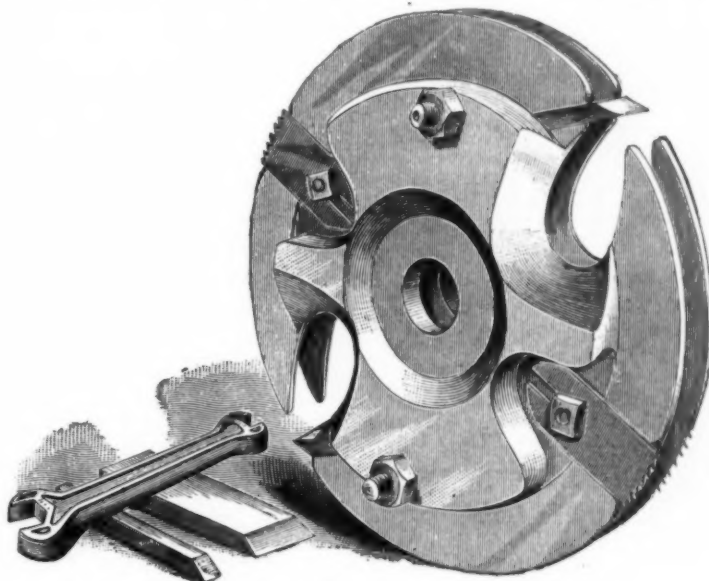
A few weeks ago we gave some interesting facts about the Jellico coal region of Tennessee and Kentucky, and in the Nashville Union of April 12, Prof. Henry E. Colton, in writing from Newcombe, Tenn., of the same section, says: "This neat little town which perpetuates the name of one of the best civil engineers of the South, is located three miles from the Kentucky line, on the Knoxville & Ohio Railroad. The valley of the Elk fork of the Cumberland is divided by a singular uplift of rocks into the local terms of Upper and Lower valleys. The first is rolling in its topography, and partakes of the influences from the high mountains, the latter in almost a dead level, and as unvaried in its geology and agricultural features as in its surface. The line of the Knoxville & Ohio Road runs though it in an almost unbroken tangent; the little river has a tortuous and sluggish flow, first on one side and then on the other, while on the east the sharp unbroken line of Pine Mountain rises suddenly, and on the west is the Jellico Mountain with its broken ranges.

On each side and underneath is coal, the thrift of the town is built on coal, and the railroad tracks are covered with cars loaded or to be loaded with coal. What better

of the Sewanee field. Below it about 100 feet is a two foot coal, and still lower cannon coal in blocks. How far still lower is the conglomerate there is no possibility of determining in this section.

The area underlaid by this coal is extensive. I have stated that the valley formed by Elk Fork of the Cumberland is cut into two parts by a great fault which is called Hell's Point and the Gorge. This fault is local, and runs in a line N. 25° E. West of it the strata are regular and the coal in them lies nearly horizontal, with a slight rise to the northwest. The Jellico Mountains commence near the Elk Gap, on the southwest, and run west of the line of this fault about eighteen miles into Kentucky. Its highest points are on the southwest end, and as the valley drops so does its summits decrease. So far as I can now say the coal strata, except for local changes, is nearly level from southwest to northeast. The same Jellico coal is in it at the upper end as at the lower, but owing to the greater elevation of the valley is nearer the general level of the surface. Viewing these facts it is somewhat of a wonder that the great coal development of the lower valley had not been shared by the upper, but it shows the old bell-weather principle exists in people as well as sheep.

The excellent coal was found near Newcombe, and the idea immediately prevailed that it existed nowhere else; it is certain



ADJUSTABLE DADO OR GROOVING HEAD.

evidence of the future great possibilities of the place. Not five years ago it was a field in indifferent cultivation, worth perhaps \$10 per acre, and the surrounding mountains simply good ranges for cattle, hardly valued at \$1 per acre. Now town lots sell at \$200 to \$400 per acre, and the mountain land near the depot has all been bought up at from \$25 to \$40 per acre. Coal did this, Jellico coal, a discovery which has nearly changed the characteristics of the coal trade of East Tennessee. Here is the original and best grade of the now famous Jellico coal, a coal which put into the Nashville market, even at the high price it is sold there, will always be used by those who have tried it once. It is a hard, black coal, lighting quickly, burning up somewhat rapidly with a bright flame, almost like pitch pine, and leaving little ash of a reddish hue. As a steam coal, for quick, hot fire, like locomotives, it has no superior, but is too far from Nashville to enter that market for that purpose.

Geologically the position of this coal has not been positively determined; the floor is a fire clay filled with stegmaria; in the roof slate are impressions of sepidodendron of several species, and the same are also found in the accompanying sandstones. This, according to Dana, is positive proof that the strata belong to the lower coal measures of Pennsylvania, what I have classed as the middle measures of this State, but it is impossible to identify it with any of the coals

that its quality is not so good as it goes toward Kentucky. The two largest operators in this field are the Standard Coal Company and the Jellico Coal Company. The last was the first opened, but the first is most complete in its plant and improvements. Both are located near Newcombe, and have their branch roads coming into that depot. The capital of the Standard Company is nearly all from Knoxville, though the General Manager, Col. J. F. McClure, is a Kentuckian. He has planned and superintended the whole arrangement, and has drawn to it an experience derived from the operation of many other mines. The president and treasurer is Maj. E. E. McCroskey, of Knoxville, a gentleman of great ability as a financier and reputation as a business man. To him was due the great success of the Central Coal Company at Coal Creek, a small concern, it is true, but one which made enormous profits.

The organization around the mine is equally good; everything is worked in the most systematic manner. It is located about two miles from the station, and is connected thereto by a wide gauge road 7,700 feet long. The coal is brought from the mine over a narrow gauge road 2,600 feet long and dropped to the shute by an incline 700 feet long, with a vertical height of 300 feet. The mine opening was commenced July 1, 1883, and the first coal was shipped February 1, 1884. From February 1, 1884, to March

1, 1885, 64,083 tons of coal have been shipped. The total cost of the mine opening, plant, etc., was over \$190,000, and the capital stock is \$500,000.

There is now employed in the operations of the mine about 150 men. I averaged a number of days work of the mine force and the amount ranged from \$1.70 to \$2.05. The houses for the hands are neat outside and comfortable inside; of them they now have ninety and are already building more.

Thus it will be seen that this operation gives employment to an average of 150 men, feeds over 1,000 persons; already loads a train of cars on the Knoxville & Ohio each day, and furnishes cheaply to the world a first-class article of fuel, and this is only one of the many such industries as are making East Tennessee increase in wealth and population. But one point I have not noted; through the energy of Maj. McCroskey and the liberality of the East Tennessee, Virginia & Georgia Railroad, this coal is now being placed at the harbor of Brunswick, Ga., for supply of steamers, and already a brisk trade has opened up. Newcombe has other industries which I have not space to note fully here. One is the excellent saw and planing mill of Rodahafer & Co., where complete houses are made ready for shipment and erection."

THE MARKETS.

OFFICE MANUFACTURERS' RECORD, 1
BALTIMORE, April 14, 1885.

The war talk in Europe has caused active speculation in wheat with a decided improvement in prices, and should war be declared it is altogether probable that a still greater advance in prices would quickly follow. In fact an Anglo-Russian war would almost surely result in a general revival of business in this country with a much higher range of prices than for some time, except in cotton, which would probably decline, but whether such a war would prove of permanent value to America admits of serious doubts. England is our best customer and any event that would lessen the purchasing power of the people of that country would be seriously felt in America. It is moreover much better that business should not receive any such stimulus, whether it be temporary or permanent, if it is to be secured at a cost so great as thousands of lives.

The market for manufactured iron has shown no improvement and trade is dull, with prices nominally as quoted, viz:

Ref. Bar Iron, 1 to 6x½ to 1.....	1½¢	1.8c
" " 1 to 4½x1½ to 1.....	1¼¢	1.8c
" " ½ to 2, round and.....	1¼¢	1.8c
Square.....	1½¢	1.8c
Hoop Iron, 1½ wide and upward.....	2½¢	2½c
Band Iron, from 1½ to 6 in. wide.....	2½¢	2½c
Horseshoe Iron.....	2½¢	3c
Norway Nail Rods.....	5¢	5½c
Black Diamond Cast Steel.....	9¢	10c
Machinery Steel.....	3½¢	4½c
Spring Steel.....	3½¢	4c
Common Horse Nails.....	17¢	18c
Railroad Spikes, 5½x9-16.....	1¢	2½c
Perkins Horse Nails.....	17¢	18c
Mule Nails.....	17¢	18c

In pig iron there is no change, the sales being moderately fair for immediate consumption, but the market lacks animation and prices continue depressed. There are signs of considerable activity in the building of new furnaces in the South in the early future. We quote prices as before, viz:

Baltimore Charcoal Wheel Iron (all Baltimore ore).....	\$28 00	\$29 00
Virginia C. B. Charcoal Wheel Iron.....	28 00	29 00
Anthracite, No. 1.....	17 00	18 00
" " No. 2.....	15 00	16 00
" " Mottled and White.....	13 00	14 00

HARDWARE.

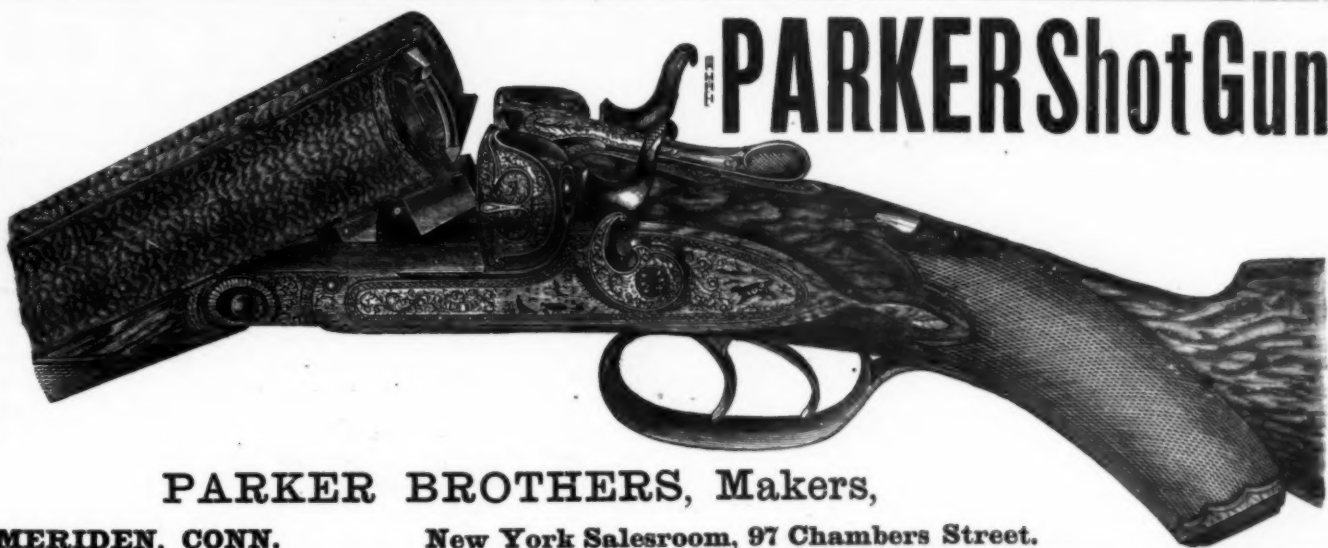
Trade continues only moderate and dealers do not appear to anticipate any decided improvement shortly. The hardware business like many other interests, is quiet and demand but fair, though there are of course some special lines in which trade is good.

The screw market is badly demoralized and prices still further cut by some of the manufacturers, who have issued new discount circulars. The Dayton Screw Com-

Fishing Tackle, and dealers in Cordage. 61 South Street, Baltimore, Md.



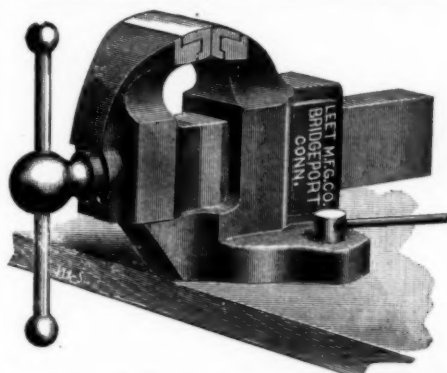
Report of the International Gun Trial, held at Bergen Point, N. J., April 3, 1884. Extract from *Turf, Field and Farm* reporting the same: "The Parker Gun, our prominent home manufacture, won the admiration of all by its fine shooting qualities. It registered in both the 10 and 12-bore classes; the greatest number of pellets in the 30-inch circle, and therefore must be awarded the palm for pattern."



PARKER BROTHERS, Makers,

MERIDEN, CONN.

New York Salesroom, 97 Chambers Street.

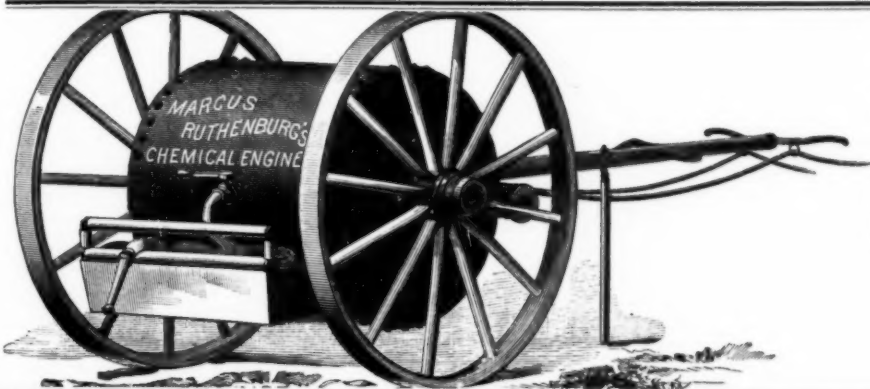
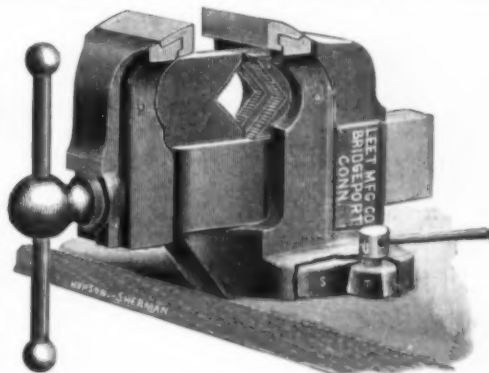


THE LEET M'F'G CO.'S Patent Sliding Jaw Bench Vises.

WITH SWIVEL BOTTOM.

These Vises can be used either as a Sliding Jaw or a common Screw Vise by simply turning in or out the small screw in backside of the head or base. It will hold work with a more powerful grip than any other Vise. The screw will never work loose when either chipping or filing. The workmanship is perfect; all the working parts are made of steel and interchangeable. Sold by all Hardware Dealers. Send for Descriptive Circular and Price List to

C. D. LEET, Bridgeport, Conn.



THERE IS NOT a town, village or large mill in the land that can afford to be without the protection from fire afforded by this Chemical Engine. Always ready for instant use. Simple, substantial and efficacious. Write for circulars to

THE RUTHENBURG Automatic Fire Extinguishing & Engineering Co.

64 West Third Street, Cincinnati, O.

MARCUS RUTHENBURG, Manager.

BRASS!

Roll, Sheet and Platers' Brass,

GERMAN SILVER,

COPPER, BRASS AND GERMAN SILVER WIRE,

BRASS and COPPER TUBING,

BATTERY and PLATERS' SILVER, &c.

PHILIP R. VOGEL, JR.

Manufacturers' Agent,

No. 79 German Street, Baltimore, Md.

FOR SALE CHEAP!

40 Horse Power VERTICAL BOILER.

This Boiler was built to order, of very best materials and workmanship; has double-riveted seams; was used but a short time, and is much better than most of the new boilers now made. Cost to build, \$650. For sale at HALF-PRICE, with fixtures, &c. Is a RARE BARGAIN. Ready for immediate delivery. Also, 18-horse HORIZONTAL ENGINE; very strong and heavy.

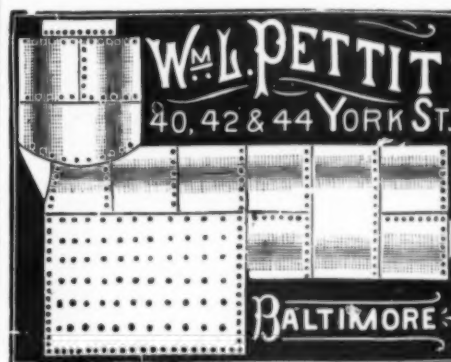
JOSEPH B. MATTHEWS,

41 Centre Market Space, BALTIMORE, MD.

STEAM ENGINES and BOILERS

2 to 2,000 Horse-Power, for all kinds of work. Also, Wood and Iron-Working Machinery. All Machinery guaranteed.

W. E. CURTISS, 1425 Filbert St. PHILADELPHIA.



NOVELTY BOILER WORKS.

MANUFACTURER OF

HIGH AND LOW PRESSURE

Steam Boilers,

Tank and Sheet Iron Work.

Estimates furnished for New Work and Repairs.

I make a specialty of SCOTCH BOILERS, the most economical in fuel, requiring very little repairs.

ALWAYS ASK FOR

ESTERBROOK'S
CELEBRATED
STEEL PENS.

PENS

LEADING NUMBERS:

048, 14, 130, 333, 135, 161

For Sale by all Stationers.

The Esterbrook Steel Pen Co.

26 John Street, New York

MWM If you want to catch the trade of Texas and Mexico you should advertise in the **Merchant and Manufacturer**. San Antonio, Texas. pronounced by the press and public to be the handsomest and best commercial journal in the South. 10 pages, 6 columns monthly. Subscription \$1 per year. Circulation 10,000 among the principal Merchants, Farmers, Handmen. Sample copies free on application.



Send for Catalogue, Chandler & Farquhar, 108 Devonshire St. BOSTON, - MASS. Tools & Supplies for all classes OF MECHANICS AND MANUFACTURERS.

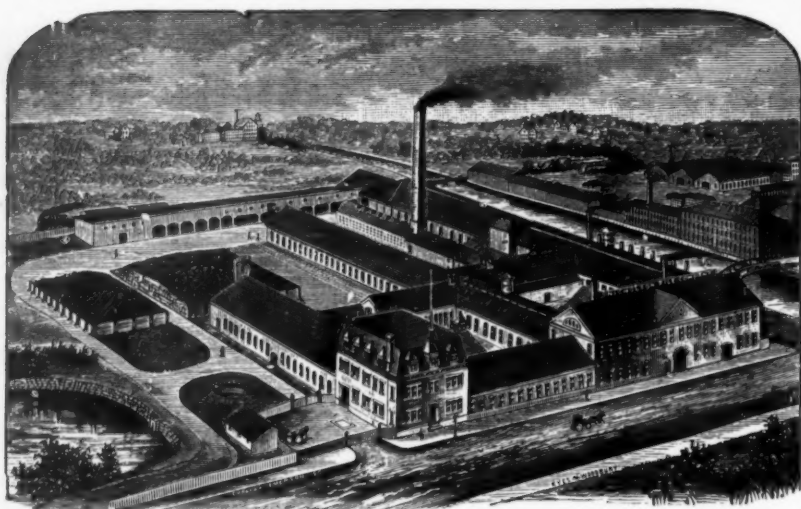
Architectural Iron Works.

J. P. WALTON & CO.

CINCINNATI, OHIO.

Manufacturers of all kinds of IRON WORK for building purposes.—Store Fronts, Columns, Lintels, Joists, Stairs, Railing, Roof-Trusses, Doors, Shutters, etc. Jail work a specialty. Write us for catalogues.

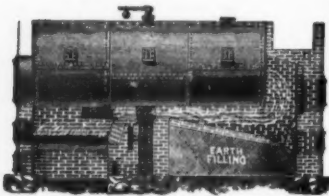
BERNHARD DIETZ Manufacturer of Printers' Rollers, and Roller Composition. Factory, cor. Light and Mercer streets, Baltimore. Prices: Composition, (bulk) 30 cents per lb.; for Casting, also, 30 cents per lb. Orders by Mail promptly attended to.



Nicholson File Co.

Works—PROVIDENCE R. I.—1882.

JARVIS PATENT FURNACE FOR SETTING STEAM BOILERS.



Economy of Fuel, with increased capacity of Steam Power. Like the **Siemens Process of Making Steel**, it utilizes the waste gases with hot air on top of the fire. Will burn all kinds of waste fuel without a blast, including Slack Coal, Sawdust, Logwood Chips, &c. Send for Circulars.

Jarvis Engineering Co.,

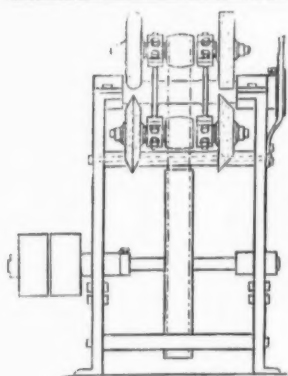
A. F. UPTON, Treas. and Gen'l Manager,
61 Oliver St., Boston, Mass.

JOSHUA C. COE, Agent for Maryland and Virginia,
O'Donald's Wharf, Baltimore, Md.

SOUTHERN REFERENCES:

Eagle & Phenix Mfg. Company, Columbus, Ga.
Anniston Mfg. Co., Anniston Ala.
J. P. King Mfg. Co., Augusta, Ga.
Rose Mining Co., Charleston, S. C.
Maryland Pavement Co., Baltimore, Md.
Brush Electric Light Co., Baltimore, Md.
Ettrick, Matoaca and Battersea Mfg. Co's.,
Petersburg, Va.
Rasin Fertilizing Co., Baltimore, Md.
Tanner & Delaney Engine Co., Richmond, Va.
Sibley Mills, Augusta, Ga.

Graniteville Mfg. Co., Graniteville, S. C.
Charleston Bagging Co., Charleston, S. C.
P. H. Mayo & Bros., Richmond, Va.
Phosphate Mining Co., Beaufort, S. C.
Brush Swan Electric Light Co., Norfolk, Va.
Columbus Ice & Refrigerator Co., Colum-
bus, Ga.
Lenoir Manufacturing Co., Lenoir, East
Tennessee.
Vanceuse Mill, Graniteville, S. C.



BLAISDELL'S
Eight Wheel Emery Machine,
FOR GRINDING

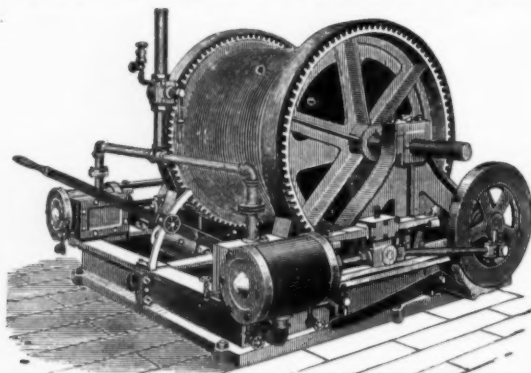


ALL KINDS OF IRREGULAR CUTTERS.

GOODELL & WATERS.

Manufacturers of all kinds of WOOD-WORKING MACHINERY, Warerooms, 115½
Liberty Street, New York. J. H. BLAISDELL, Manager.

IMPROVED HOISTING ENGINES



—WITH—
WIRE-ROPE DRUMS
AND
SAFETY BRAKES.

SPECIALLY ADAPTED TO
Mining & Interests.

MANUFACTURED BY THE
Lidgerwood Mfg. Co.

96 Liberty St., N. Y.
Hoisting Engines for all purposes.

MORTON, REED & CO., Agts.
59 & 61 German St., Baltimore.

TO STEAM USERS.

I will Remove and Prevent Scale in any Steam Boiler, or make no charge. My Remedy will also
Neutralize the most destructive waters, and prevent

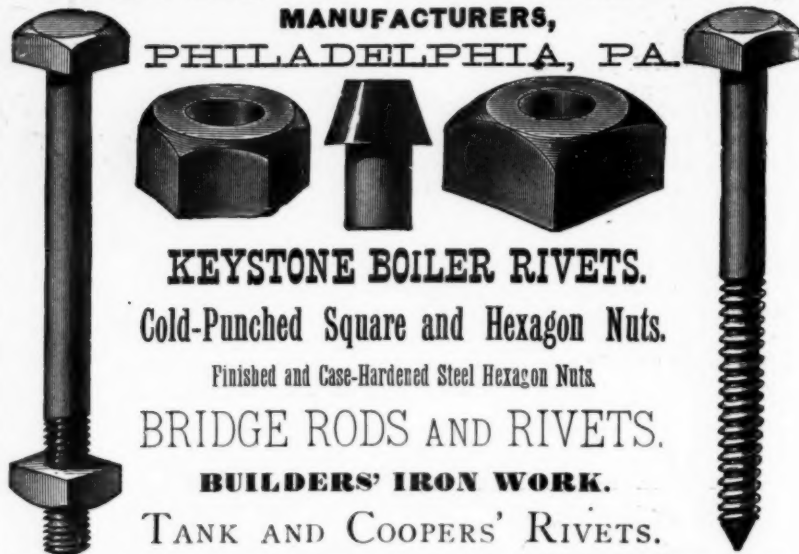
GROOVING, FITTING, AND WASTING OF IRON.

Which causes so many Boiler Explosions. A book on "Care and Management of Steam Boilers."
Address GEO. W. LORD, 316 Union Street, PHILADELPHIA, PA.

MOOPES & TOWNSEND,

MANUFACTURERS,

PHILADELPHIA, PA.



KEYSTONE BOILER RIVETS.

Cold-Punched Square and Hexagon Nuts.

Finished and Case-Hardened Steel Hexagon Nuts.

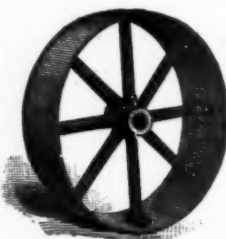
BRIDGE RODS AND RIVETS.

BUILDERS' IRON WORK.

TANK AND COOPERS' RIVETS.

THE MEDART PATENT

WROUGHT * RIM * PULLEY.



THE LIGHTEST, STRONGEST,
BEST BALANCED, AND CHEAPEST
IN THE WORLD.

Whole pulleys from 9 inches to 120 inches diameter. Split pulleys from
12 inches to 120 inches diameter.

All widths of face up to 36 inches, crowning or straight, with single,
double or triple sets of arms. Also tight and loose pulleys. Absolute
Satisfaction Guaranteed. SHAFTING, HANGERS, COUPLINGS, &c.

MEDART PATENT PULLEY CO.,

1206 TO 1214 N. MAIN STREET, ST. LOUIS, MO.

STORES: 99 & 101 W. Second St., Cincinnati. 24 & 26 S. Canal St., Chicago.

MACHINE * MOLDED Cast Pulleys

—Turned, Bored and Balanced.—

Also HANGERS, Every Description of COUPLINGS and SET COLLARS.

Send for Price List and Discounts.

Todds & Stanley Mill Furnishing Co.

Office and Factory, 917 N. 2d Street, ST. LOUIS.



THE MACKENZIE PATENT CUPOLA AND BLOWER

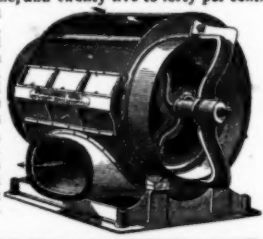
Send for Circular to SMITH & SAYRE MFG. CO., Proprietors, 245 Broadway, N. Y.



This Cupola has made a great revolution in melting Iron. It differs from all others in
having a CONTINUOUS TUYERE, or in other words, the blast enters the fuel at all points.
Above one ton capacity per hour, they are made oval in form. This brings the blast to
the center of the furnace with the least resistance and smallest possible amount of power,
and in combination with the continuous Tuyere causes complete diffusion of the air
throughout the furnace, and uniform temperature, melting ten or fifteen tons an hour
with the pressure of blast required to melt two or three tons in an ordinary Cupola. It
also enables us to save very largely in time and fuel, the experience of our customers
showing a gain of twenty-five to fifty per cent. in time, and twenty-five to forty per cent.
fuel over the ordinary Cupola, and a BETTER

QUALITY OF CASTING, especially in light work.
This is due to the thorough diffusion of the air and
more perfect combustion, extracting less carbon
from the iron, making a softer and tougher casting.

We manufacture these Cupolas of any desired
capacity, numbered from 1 to 20, inclusive, the
numbers indicating the melting capacities in TONS
PER HOUR—No. 1, one ton; No. 2, two tons; No. 3,
three tons per hour, and so on up to 15, or 20 tons.
We have improved the construction of these Cupolas
in every way, have increased their strength and
durability, and sought to make them as convenient
for working and repairs as our own and the experi-
ence of our customers could suggest.



"DYNAMIC" ROCK DRILLS.

Air Compressors, Boilers,

HOISTING ENGINES,

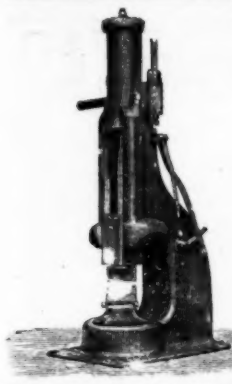
Mining, Quarrying and Stone-Working Machinery a Specialty.

SEND FOR CIRCULARS AND CATALOGUES TO

C. W. MELCHER, 620 Chestnut St.

—ST. LOUIS, MO.— Mention this paper



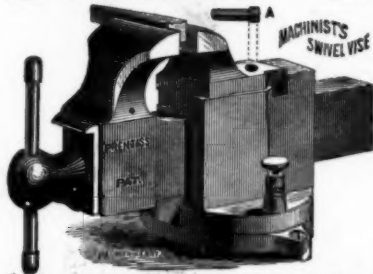


Wm. B. Bement & Son,

PHILADELPHIA,
Manufacturers of
METAL + WORKING + MACHINE
TOOLS

of all descriptions, and of a great number of sizes, including Lathes, Planers, Drills, Shapers, Slotters, Milling and Boring Machines, Steam and Hydraulic Riveters, Cranes, Punches, Shears, Bending Rolls, Plate Planers, &c.

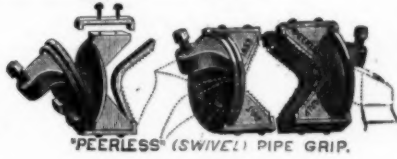
Prentiss' & Patent Vises.



"Peerless" (Swivel Jaw) Pipe Grip.
Every Part Interchangeable.
CAN BE USED ON ANY VISE.

Adjustable Jaw.
Stationary or Pat. Swivel Bottoms
CANNOT GET OUT OF ORDER.

Cheapest and Best Vises for Railroad Shops, Machinists, Manufacturers, Mechanics, &c.



For Sale by the Trade.

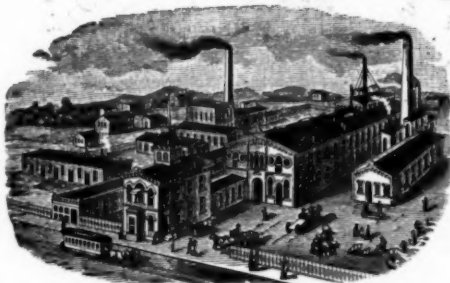
PRENTISS VISE CO., 23 Dey Street, NEW YORK, Sole Proprietors.

Ludlow Valve Manfg. Co.

Office and Works:

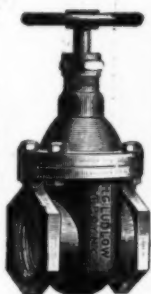
938 to 954 River Street, and 67 to 83 Vail Avenue,

—TROY, N. Y.—



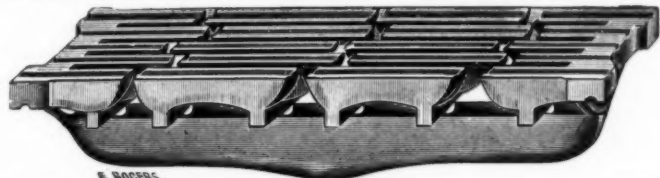
VALVES

Double and Single Gate, 1/2 inch to 48 inch, for Water, Steam, Oil, Gas, etc., etc., etc. Send for Circular.



Also Fire Hydrants, Yard and Wash Hydrants, Check and Foot Valves.

WREN'S PATENT GRATE BAR.



Is Enduring, Economical, Saves Fuel, Carries a Live and Even Fire. Send for Circular and list of users.

DAVID S. CRESWELL,
816 RACE STREET, PHILADELPHIA, PA.

EWART'S PATENT CHAIN BELTING

Especially designed for the rapid and economical handling of Grain, Malt, Saw Dust, Coke and Clay, Dry and Spent Tan, Phosphates and Chemicals, Broken Stone, Coal, Ice, Ores, etc.

R. SWORMSTEDT,
48 S. FREDERICK ST.

Sole Agent for Maryland, Virginia, North Carolina, South Carolina and Georgia.

Send for Illustrated Catalogue.

Please mention this paper.

WM. SELLERS & CO.

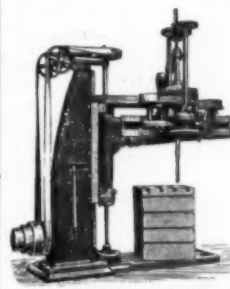
PHILADELPHIA.

Iron and Steel-Working Machine Tools

For Railways, Machine Shops and Rolling Mills,

—ALSO—

Shafting, Pulleys, Hangers, Couplings, &c.



Were the first parties to design and introduce the BALL and SOCK-ET HANGERS, ADJUSTABLE COUPLINGS, and the system of selling Shafts, Pulleys and Couplings by the piece. Will be pleased at any time to give estimates for work in place, in mills, or at our works.

Price-Lists and other information given when requested.

BACON

Winding Engines,
Furnace Hoists,
Mine Hoists.

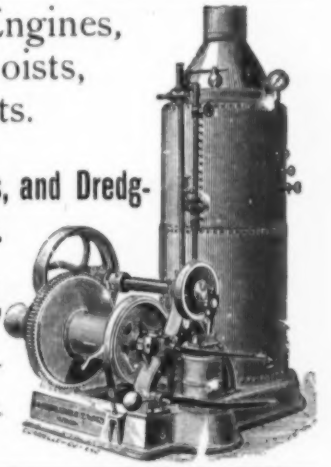
(With or without Boilers.)

"Mining Plants," Concentrating Works, and Dredging Machinery Furnished Complete.

COPELAND & BACON,
85 Liberty Street, New York.

FAIRBANKS & CO., Agents,

References: { Croton Magnetic Iron Mines, Brewster's, N. Y.
Crown Point Iron Co., Crown Point, N. Y.
Belvidere Iron Co., 52 Broadway, N. Y.
Sea Island Chemical Co., Beaufort, S. C.



THE NATIONAL CHUCK

WARRANTED

THE BEST CHUCK IN THE MARKET.

MANUFACTURED BY

THE National Mfg. Co.

MANUFACTURERS OF

Combination, Universal
and Independent
LATHE CHUCKS.



NEW HAVEN, CONN.

THE MIDVALE STEEL CO.

TIRES and AXLES

OF EVERY DESCRIPTION.

TOOL-
AND
MACHINERY STEEL



SPRING AND GUN
STEEL.

CRUCIBLE AND OPEN HEARTH STEEL.

Works & Main Office:

Nicetown, Philadelphia, Pa.

BRANCH OFFICE:

333 Walnut St., Philadelphia, Pa.

The Babcock & Wilcox Water Tube Boilers.

BRANCH OFFICES:

50 Oliver Street,
Boston.

32 N. 5th St.,
Philadelphia.

26 Fourth Ave.,
Pittsburg.

54 Carondelet
St., N. Orleans.

64 W. Third St.,
Cincinnati.

BRANCH OFFICES:

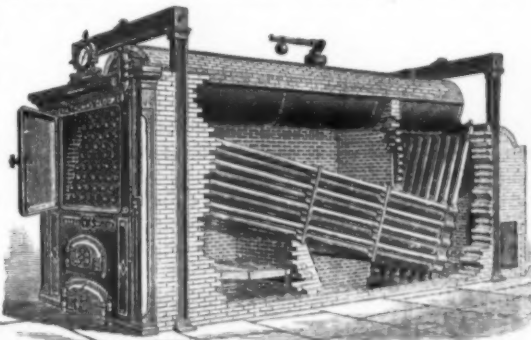
707 Market St.,
St. Louis.

64 S. Canal St.,
Chicago.

561 Mission St.,
San Francisco.

San Ignacio,
No. 30, Havana,
Cuba.

107 Hope Street,
Glasgow,
Scotland.



Manufactured by the BABCOCK & WILCOX CO., 30 Cortlandt Street, NEW YORK.

SAML. G. B. COOK & CO., HARDWARE

MANUFACTURERS' AGENTS

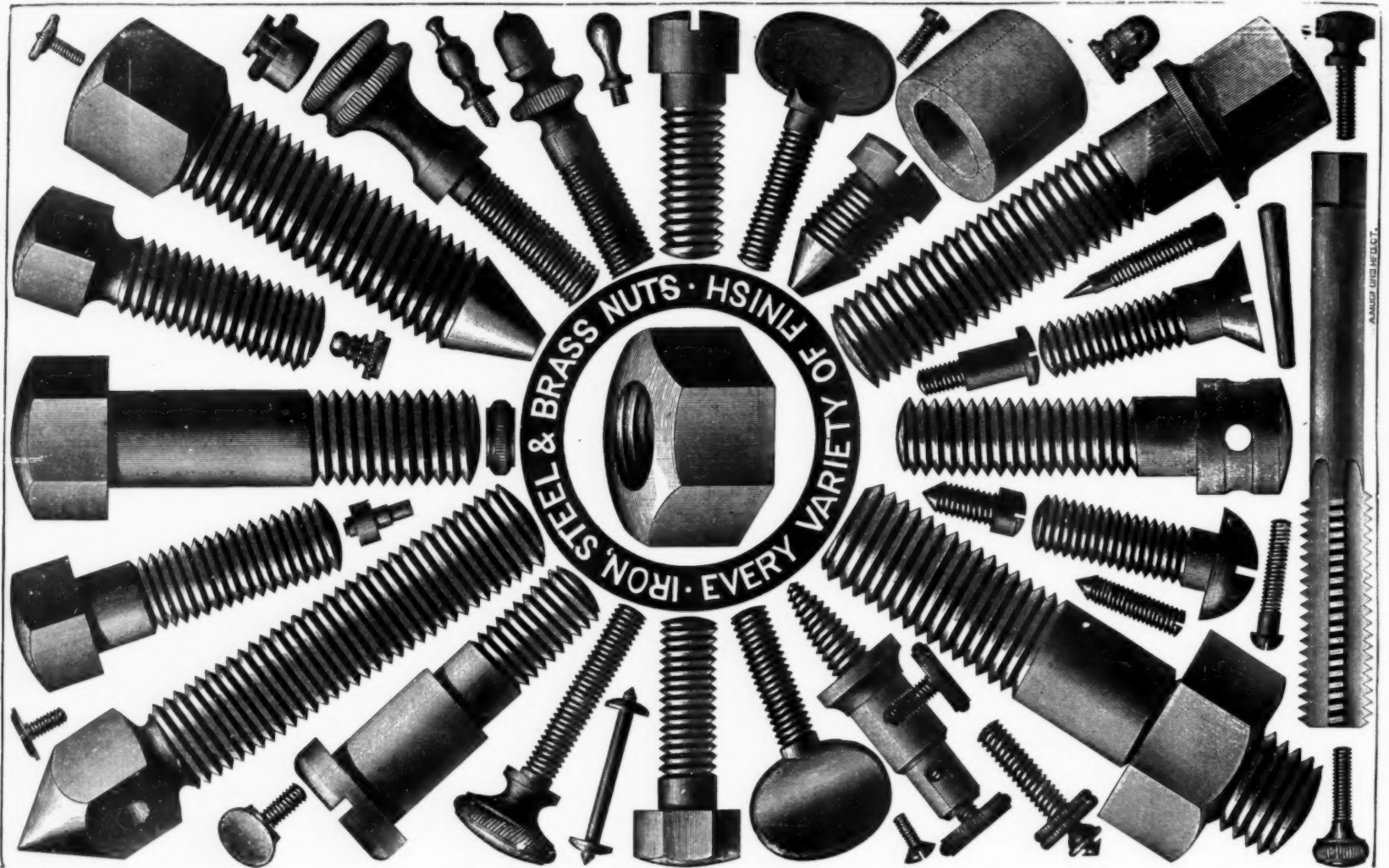
63, 65, 67 and 69 German St., BALTIMORE, MD.

AGENTS FOR

T. V. Allis Mfg. Co.—Buckthorn Wire.
American Screw Co.—Screws, Rivets, Bolts, etc.
Branford Lock Works.
Boss Molasses Gates.
Carr & Crawley.—Shelf and Carriage Hardware.
Lancaster Bolt Co.—Eagle Carriage Bolts.
Lawson & Brenizer.—Hay and Manure Forks.
Meriden Britannia Co.—Rogers Bros.' At Plated Goods.
Northwestern Horse Nail Co.
Nicholson File Co.
Naukatuck Cutlery Co.
Globe Horse Nail Co.

Clark Hardware Co.—Spring Butts, Screen Frames, etc.
Cowles Hardware Co.—Geers, Butts, Screw Drivers, etc.
H. Chapin's Sons.—Rules, Levels, Gauges, etc.
Clark Bros. & Co.—Bolts.
Essex Horse Nails.
A. Field & Sons.—Tacks, Finishing Nails, etc.
Hubbard, Bakewell & Co.—Lippincott Axes, Saws, Shovels and Hoes.
Holroyd & Co.—Stocks and Dies.
Henry W. Kipp.—Hammers.
Klein, Logan & Co.—Picks, Mattocks, Sledges, etc.
Kimball's Patent Shovels and Spades.
Lockwood Steel Hoes.

Peck Bros. & Co.—Brass Cocks.
Payson Mfg. Co.—Building Hardware.
Patton Mfg. Co.—Enameled and Tin'd Hollow Ware.
Roy & Co.—Strap and T Hinges and Wrought Butts.
Saranac Horse Nail Co.
Scott Mfg. Co.—Peach and Apple Pearers, etc.
George M. Scott.—Blacksmith Bellows.
Wilson's Mfg. Co.—Coffee Mills, Vises and Ship Hardware.
Walker's Horse and Mule Shoes.
International and Plimlico Brand of Horse Nails, Foreign and Domestic Hardware, Cutlery, Chains, Pistols, etc.



The Hartford Machine Screw Company, Hartford, Conn.

—MANUFACTURERS OF—

Hexagon, Square, Round or Fillister Head Cap Screws, Oval Point and Cupped Point Set Screws, Collar Screws, Hanger Screws, Stud Bolts, Studs and Rolls.

Sewing Machine Screws, Gun Screws, Clock Screws and Trimmings, Piano Screws and Trimmings, Shear, Thumb and Watch Screws, Metal Dowel Pins for Pattern Work, Taper and Straight Pins of all Sizes, Taps and Reamers to match. Telegraph, Electrical and Optical Work. All kinds of Fancy Turned Metal Work. Many of the above varieties we carry in stock.

Small Screw Tools a Specialty.

Cheap Rotary Pumps for Supplying Machine Tools with Oil, Soda Water, &c.

The attention of Model Makers, Machine Builders and Buyers of Machine Screws is called to the fact that we carry in stock a great variety of Milled Machine Screws, including all Standard Sizes, with Taps to match. By Referring to our Stock, much Time and Expense may be saved. PRICES Reasonable. Send for Lists.

NEW YORK. ♦ CINCINNATI. ♦ SAN FRANCISCO.

AULT & WIBORG,

—MANUFACTURERS OF—

BLACK * AND * COLORED * PRINTING * INKS,

* Lithographic Inks and Varnishes, *

CINCINNATI, OHIO.

Eastern Branch, 21 and 23 Ann Street, - - - NEW YORK.

—R. H. C. VALENTINE, Manager.—

→ HARDWARE. ←

Baltimore Wholesale Prices.

ANVILS.	
Eagle and Vulcan.....	10 c. dis 20%
Wright's.....	10 c. dis 10%
Armstrong's Mouse Hole.....	10 c. dis 10%
Trenton.....	10 c. dis 10%
Wilkinson's.....	10 c. dis 10%
AUGERS AND BITS.	
Conn. Valley Mfg. Co.....	dis 60%
Douglas Mfg. Co.....	dis 60%
Criswell's.....	dis 60%
Patent Solid Head.....	dis 60%
Russell Jennings' Auger, Dowel, Machine.....	dis 60%
Dowel and Hand Rail Bits.....	dis 60%
Ives' "Jennings" Bits.....	dis 60%
Expansive Bits, Clark's small, 1/8; large, 26, dis 25%	
Expansive Bits, Ives'.....	dis 33%
Expansive Bits, Blake's.....	dis 33%
Hollow Augers, Ives'.....	dis 25%
Hollow Augers, Douglas'.....	dis 25%
Hol. Aug., Bonney's Adjust., 1/2 doz \$4.8, dis 25%	
Hol. Aug., Stearns' Adjust., 1/2 doz \$4.8, dis 25%	
Hol. Aug., Ives' Expansive, each \$4.50, dis 30%	
Hol. Aug., Universal Expansive, each \$4.50, dis 30%	
Wood's.....	dis 25%
Gimlet Bits.....	dis 25%
Gimlet Bits, Diamond.....	dis 25%
Double Cut Gimlet Bits, Shephardson's.....	dis 40%
Double Cut Gimlet Bits, Douglas'.....	dis 33%
Double Cut Gimlet Bits, Ives'.....	dis 50%
Morse's Bit Stock Drill.....	dis 25%
L'Hommedieu's Ship Augers.....	dis 15%
AWL HAFTS.	
Sewing Brass Ferrule.....	dis 40%
Patent Sewing, Short.....	dis 40%
Patent Sewing, Long.....	dis 40%
Patent Peg, Plain Top.....	dis 40%
Patent Peg, Leather Top.....	dis 40%
AWLS, BRAD SETS, AC.	
Awls, Sewing, Common.....	75c. to \$1
Awls, Shouldered Peg.....	75c. to \$1
Awls, Patent Peg.....	50c. to \$1.50
Awls, Shouldered Brad, gross \$2.70, dis 25%	
Awls, Handled Brad.....	dis 25%
Brad Sets, Aiken's.....	dis 45%
Brad Sets, No. 42, \$1.50; No. 43, \$1.50, dis 70%	
Brad Sets, Stanley's Exc., No. 1, \$1.60, dis 30%	
Brad Sets, Stanley's Exc., No. 2, \$1.60, dis 30%	
Brad Sets, Stanley's Exc., No. 3, \$1.60, dis 30%	
AXES.	
Collins & Co.....	dis 75%
Cohoes Mfg. Co.....	dis 75%
Lippincott or Mann's.....	dis 60%
Single Bit, 1/2 to 5/8 and under.....	dis 60%
Single Bit, 1/2 to 5/8 and over.....	dis 60%
Single Bit, beveled.....	dis 60%
Double Bit, 1/2 to 5/8 and under.....	dis 60%
Double Bit, 1/2 to 5/8 and over.....	dis 60%
Double Bit, beveled.....	dis 60%
Second quality Axes.....	dis 60%
AXLES.	
Sheldon & Co., iron.....	dis 55%
" " steel.....	dis 55%
AXLE GREASE—Fraser's.....	
Spring Balances.....	dis 40%
BELLS.	
Hand, Light Brass.....	dis 75%
Hand, White Metal.....	dis 60%
Hand, Silver Chime.....	dis 20%
Hand, Globe (Cone) Patent.....	dis 25%
Gong, Abbe's.....	dis 30%
Gong, Yankee.....	dis 30%
Gong, Barton's.....	dis 30%
Leon Reading.....	dis 25%
Pull, Brook's.....	dis 25%
Crank, Taylor's.....	dis 25%
Lever, Sargent's.....	dis 55%
Bloomfield.....	dis 20%
Lever, R. & E. M. Co's.....	dis 45%
Call.....	dis 25%
Cow, Common Wrought.....	dis 55%
Cow, Western, Sargent's List.....	dis 55%
Cow, Kentucky, Sargent's List.....	dis 55%
Cow, Moore's or Dodge's, Genuine Ky., new list:	
Nos. 0 1 1/2 2 3 5 6 Hog 1 dis 60 &	
\$12 0 \$9 \$8 \$7 \$4 \$3 \$2 \$1 10 \$	
Cow, Texas "Star".....	dis 40%
BELLGONGS.	
Blacksmith's Common.....	dis 50%
Molder's.....	dis 25%
Hand Bellows.....	dis 25%
BLIND FASTENERS.	
Francis.....	dis 50%
Macrell's.....	dis 50%
Van Sand's Screw Pattern.....	dis 50%
Van Sand's Old Pattern.....	dis 50%
Merriman's.....	dis 50%
Zimmerman's.....	dis 50%
Zimmerman's, 9 in.....	dis 50%
Zimmerman's, without screws.....	dis 50%
BLIND STAPLES.	
Barbed, 1/2 in. and larger.....	dis 10%
Barbed, 3/4 in.....	dis 10%
BOLTS.	
Penfield Block Co., Rope and Iron Strap'd.....	dis 40%
Cast Iron Barrel Shutter, &c.....	dis 55%
Cast Iron Chain (Sargent's list).....	dis 60%
Wrought Barrel.....	dis 55%
Wrought Square.....	dis 55%
Wrt. Shutter, all Iron, Stanley's list.....	dis 55%
Wrt. Shutter, Brass Knob, Stanley's list.....	dis 55%
Wrought Shutter, Sargent's list.....	dis 55%
Wrought Sunk Flush, Sargent's.....	dis 65%
Wrought Sunk Flush, Stanley's.....	dis 65%
Wrought B. K. Flush, Stanley's.....	dis 65%
Carriage and Tire, Common, new list.....	dis 75%
Carriage and Tire, Philadelphia Pattern.....	dis 80%
Carriage Bolts, Clarke's.....	dis 80%
Norway.....	dis 75%
R. B. & W. Carriage (old list).....	dis 65%
Tire, American Screw Co's, Phila.....	dis 80%
Tire, "Bay State".....	dis 70%
Eagle Philadelphia Tire Bolt.....	dis 82%
Stove.....	dis 65%
Plow.....	dis 50%
Machine.....	dis 70%
Bolt Ends and Lag Screws.....	dis 70%
BORAX.	
150 lb net.....	dis 50%
BRACES.	
Q. S. Backus.....	dis 50%
Barber's.....	dis 40%
Spofford's Patent.....	dis 50%
Ive's Patent Braces.....	dis 50%
Common Ball (American).....	dis 55%
Amidon's.....	dis 50%
BORING MACHINES—WITHOUT AUGERS.	
Sweet & Clark upright, 3.60 angular.....	dis 40%
Lawrence.....	dis 30%
Hubbard.....	dis 30%
Phillips, with Augers.....	dis 70%
BRACKETS.	
Shelf, plain.....	dis 50%
Shelf, fancy.....	dis 55%

BRIGHT WIRE GOODS.	
New list.....	dis 70%
BULL RINGS.	
Union Nut Co.....	dis 55%
Sargent's.....	dis 60%
Humason, Beckley & Co's.....	dis 60%
BUTTS.	
Wrought Brass.....	dis 75%
Cast Brass, Fast Joint.....	dis 20%
Cast Brass, Loose Joint.....	dis 20%
Fast Joint, Narrow.....	dis 45%
Fast Joint, Broad.....	dis 45%
Loose Joint.....	dis 60%
Loose Joint, Japanned.....	dis 60%
Loose Joint, Jap, with Acorns.....	dis 60%
Parliament Butts.....	dis 60%
Mayer's Hinges.....	dis 60%
Loose Pin, no Acorn.....	dis 60%
Loose Pin, Acorns.....	dis 60%
Loose Pin, Acorns, Japanned.....	dis 60%
Loose Pin, Acorns, Jap'd, Plated.....	dis 60%
Wrought Iron.	
Fast Joint, Narrow.....	dis 60%
Fast Joint, Lt. Narrow.....	dis 60%
Fast Joint, Broad.....	dis 60%
Loose Joint, Broad.....	dis 60%
Table Butts, Back Flaps, &c.....	dis 60%
Inside Blind, Regular.....	dis 60%
Inside Blind, Light.....	dis 60%
Loose Pin, Wrt.....	dis 60%
Loose Pin, Light.....	dis 60%
Spring Hinges.	
Geer's Spring and Blank Butts.....	dis 25%
Clarke Hardware Co's.....	dis 25%
American Spring Hinge Co's.....	dis 25%
Gem Spring Hinges.....	dis 25%
Blind Butts, Shepard's, Nos. 50 and 60.....	dis 70%
Blind Butts, Shepard's, No. 50.....	dis 70%
Blind Butts, Shepard's, No. 75.....	dis 70%
Blind Butts, Lull & Porter.....	dis 75%
Blind Butts, Huffer.....	dis 50%
Blind Butts, Clarke's, Nos. 1, 3, 5.....	dis 70%
Standard Lull & Porter.....	dis 75%
BOW PINS.	
Humason, Beckley & Co's.....	dis 55%
Sargent & Co's.....	dis 60%
Hotchkiss.....	dis 25%
BUTCHER'S CLEAVERS.	
Humason & Beckley Mfg. Co.....	dis 25%
Bradley's.....	dis 25%
Beatty's.....	dis 25%
1 2 3 4 5 6 7 8	
16.50 19.00 21.50 24.00 27.00 30.00 33.50 36.50	
CAN OPENERS.	
American.....	dis 75%
New Idea.....	dis 75%
No. 4, French.....	dis 55%
No. 5, Iron Handle.....	dis 75%
Sardine Scissors.....	dis 55%
Sprague, No. 1, 2; No. 2, 2.25; No. 3, 2.50; dis 50%	
Universal.....	dis 33%
CAPS, PERCUSSION.	
U. M. C., F. C. trimmed.....	dis 10%
U. M. C., F. L. ground.....	dis 10%
U. M. C., Cen. fire ground.....	dis 10%
U. M. C., Double W. Proof.....	dis 10%
G. D. & S. B.....	dis 30%
E. B. 1-10, Eley's.....	dis 60%
Musket, in 1-10's.....	dis 55%
Hicks Ground Edge in Brass Boxes.....	dis 55%
CARTRIDGES.	
Rim.....	dis 50%
Central Fire, pistol size.....	dis 33%
" " Military.....	dis 25%
B. B. Caps, Round Balls.....	dis 1.75
" Swaged Conical.....	dis 1.90
NEW LIST ON CARTRIDGES.	
Rim-fire, 22 short.....	dis 6.00
" 38 ".....	dis 15.50
" 38 ".....	dis 18.00
" 41 ".....	dis 17.50
Central Fire—32, \$11.00; 38, \$13.50; 41, 15.00; 44, \$19.	
CARPETS.	
Horse and Curry, new list, July, 1881.....	dis 10%
Cotton, new list, July, 1881.....	dis 10%
Wool, new list, July, 1881.....	dis 10%
CASTERS.	
Bed.....	dis 50%
Plate and Shallow Socket.....	dis 50%
Deep Socket.....	dis 25%
Martin's Patent (Phoenix).....	dis 25%
CATTLE LEADERS.	
Humason, Beckley & Co's.....	dis 60%
Sargent's.....	dis 60%
P. S. & W.....	dis 25%
CHAIN.	
German Halter and coil Chain.....	dis 50%
Trace, Breast and Fancy.....	dis 45%
Oneida Halter Chain (old list).....	dis 45%
Galvanized Pump Chain.....	dis 80%
Jack Chain, Iron.....	dis 60%
Jack Chain, Brass.....	dis 50%
CHALK.	
White.....	dis 60%
Red.....	dis 60%
Blue.....	dis 60%
White Crayons.....	dis 60%
COTTON LINES.	
Cotton Fish Lines.....	dis 33%
Cotton Chalk Lines, 20 feet:	
Nos. 11, 13, 15, 17, 30, dis 33%	
3.00 3.60 4.00 4.50 5.25, dis 33%	
CHISELS.	
Socket Framing, Crossman.....	dis 65%
Socket Framing, P. S. & W.....	dis 70%
Socket Framing, Douglas'.....	dis 70%
Socket Firmers, Crossman.....	dis 65%
Socket Firmers, Ohio Tool Co.....	dis 60%
Socket Firmers, Douglas'.....	dis 70%
Socket Corner.....	dis 70%
Tanged Firmers.....	dis 40%
Tanged Firmers, Butcher's.....	dis 40%
I. Merrill's Socket and Framing Chisel.....	dis 65%
CLAMPS.	
Iron, Screw, Eagle.....	dis 50%
Iron, Adjustable, Stearns'.....	dis 20%
Iron, Cabinet, Sargent's.....	dis 65%
Iron, Carriage maker's, Carr & Crawley.....	dis 25%
CLIPS, AXLE.	
Norway or Best.....	dis 60%
Superior.....	dis 45%
Conestoga.....	dis 60%
Coal Hods—Griffiths.....	dis 40%
COCKS, BRASS.	
Racking, new list, July 10, 1880.....	dis 50%
Globe, new list, July 10, 1880.....	dis 50%
Plain Bibbs, new list, July 10, 1880.....	dis 50%
Ale and Beer, new list, July 10, 1880.....	dis 50%
COFFEE MILLS.	
Parker's.....	dis 45%
Wilson's.....	dis 45%
Logan & Strobidge.....	dis 45%
Enterprise Mfg. Co.....	dis 45%
COMPASSES, DIVIDERS, AC.	
Compasses.....	dis 55%
Calipers.....	dis 55%
Dividers.....	dis 55%
Cock's Pencil.....	dis 10%

COOPERS TOOLS.	
Bradley's.....	dis 15 00 %
Barton's.....	dis 20 00 %
CROW BARS.	
Cast Steel.....	dis 60 00 %
Iron, Steel Points.....	dis 40 00 %
CURTLING IRONS, AC.	
1/2, 3/4, 1 in., \$1.80, 2.00, 2.50.....	dis 10 00 %
Curting Tongs.....	dis 36.65, dis 10 00 %
Pinching Irons.....	dis 77.50, dis 20 00 %
CURRY COMBS.	
Fitch's new list.....	dis 50 00 %
Hotchkiss, Novelty, new list, July, 1880.....	dis 25 00 %
Hotchkiss, Excelsior Superior Champion.....	dis 25 00 %
Lawrence, "Perfect".....	dis 25 00 %
Rubber.....	dis 25 00 %
Sweet & Clarke.....	dis 10.00, dis 25 00 %
Lusters.....	dis 25 00 %
CURTAIN PINS.	
Silvered Glass.....	net
White Enamel.....	net
CUTLERY.	
Association (Table).....	net
Naugatuck Cutlery Co.....	list net
Excelsior Knife Co.....	net
Wilson's Butcher and Shoe Knives.....	dis 30 00 %
Ames' Shoe Knives.....	dis 15 00 %
Wm. Rogers Mfg. Co., Plated Cutlery.....	net
DOG COLLARS.	
Embossed Gilt.....	dis 20 00 %
Leather.....	dis 25 00 %
Brass.....	dis 25 00 %
DOOR SPRINGS.	
Torrey's Rod, regular size, 1/2 doz., \$3.....	dis 40 00 %
Gem (Coll):	
No. 1, Large Japanned.....	dis 4.00
No. 2, Medium Japanned.....	dis 2.75
No. 3, Small Japanned.....	dis 2.00
No. 4, ("Shoo Fly") Screen door size, 1.50	
No. 5, Screen door size.....	dis 2.00
No. 6, Medium.....	dis 2.75
No. 7, Large.....	dis 4.00
Standard—10 doz \$1.25; 9 doz \$1.75.....	dis 50 00 %
8 doz 2.50; 6 doz \$3.50.....	dis 50 00 %
Hercules.....	dis 50 00 %
DRAWING KNIVES.	
Ohio Tool Co.....	dis 60 00 %
Crossman's No. 1.....	dis 65 00 %
Nobles Mfg. Co.....	dis 15 00 %
Bradley's.....	dis 35 00 %
Adjustable Handle.....	dis 20 00 %
P. S. & W.....	dis 70 00 %
Douglas.....	dis 70 00 %
DRILLS AND DRILL STOCKS.	
Blacksmiths'.....	each, \$2.50, dis 10 00 %
Blacksmiths' Self-Feeding.....	each, 7.50, dis 20 00 %
Breast, P. S. & W.....	dis 20 00 %
Breast, Wilson's.....	dis 20 00 %
Breast, Millers Falls.....	each, \$3.00, dis 25 00 %
Breast, Bartholomew's.....	each, \$2.50, dis 25 00 %
Wilson's Drill Stocks.....	dis 10 00 %
Automatic Boring Tools.....	each, \$2.25, dis 20 00 %
EGG BEATERS.	
Dover.....	dis 20.50, dis 2 00 %
Medallion.....	gross, \$12.00
Victoria.....	gross, \$10.00
EMERY AND EMERY PAPER.	
Regular numbers.....	dis 60 00 %
Flour and F. F.....	dis 40 00 %
B. & A. Emery Paper.....	dis 30 00 %
ENAMELED AND TINNED WARE.	
Kettles.....	dis 60 00 %
Sauce Pans.....	dis 40 00 %
Tinned Sauce Pans.....	dis 40 00 %
Escutcheon Pins—Brass.....	dis 50 00 %
ESCUCTIONS.	
Door Lock.....	Same discounts as Door Lock
Brass Thread.....	dis 25 00 %
Wood.....	dis 25 00 %
FAUCETS.	
Fenn's.....	dis 40 00 %
Fenn's Cork Stops.....	dis 33 1/2 %
Star.....	dis 55 00 %
Frary's Patent Petroleum.....	dis 20 00 %
West's Patent Key.....	dis 45 00 %
Anchor Lock.....	dis 45 00 %
Metallic Key, Leather Lined.....	dis 60 00 %
Cork Lined.....	dis 70 00 %
J. Sommer's Best Metallic Key.....	dis 40 00 %
J. Sommer's Cork Lined, 1st quality.....	dis 50 00 %
FILES.	
E. M. Boynton's.....	new list, dis 25 00 %
Western File Co.....	dis 45 00 %
Butcher's.....	dis 45 00 %
Moss & Gamble.....	\$4.50 to 4 00 %
H. Disston & Sons (new list).....	dis 40 00 %
Heller Bros.' Horse Rasps.....	dis 30 00 %
Nicholson.....	dis 30 00 %
New American.....	dis 30 00 %
Union File Co.....	dis 45 00 %
Stubs, new list.....	\$7.50 to 4 25 % off
FLUTING MACHINES.	
Knox, 1/2-inch Rolls.....	\$3.50 each 1.....dis 35 00 %
Knox, 3/4-inch Rolls.....	\$4.00 each 1.....dis 35 00 %
Knox, 1-inch.....	\$2.50, dis 35 00 %
Eagle, 3/4-inch Roll.....	\$2.15, dis 35 00 %
Eagle, 1/2-inch Roll.....	2.85, dis 35 00 %
Crown, 1/2-in., \$3.50; 6, \$4.00; 8, \$6.50 each.....	dis 35 00 %
Crown Jewell.....	6-in., \$3.50 each.....dis 35 00 %
American, 5-in., \$3; 6-in., \$3.40; 7-in., \$4.50 each.....	dis 35 00 %
Domestic Fluter.....	\$1.50 each, net
Geneva Hand Fluter, White Metal, 1/2 doz \$12.....	dis 25 00 %
Crown Hand Fluter, Nos. 1, \$15; 2, \$12.50;	
3, \$10.50; 4, \$8.25 doz.....	dis 35 00 %
Combined Fluter and Sad Iron, 1/2 doz \$15.00, dis 30 00 %	
FORKS.	
Lawson & Brenizer.....	dis 50 00 %
Remington.....	dis 50 00 %
Sheble & Fisher.....	dis 50 00 %
FRY PANS.	
Burnished list as follows.....	dis 60 00 %
No.....	1 2 3 4 5 6 7 8
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	

LAWN MOWERS.	
Acme Ruckeye, Easy and Excelsior, new list, dis 40 %	
LOCKS AND LATCHES.	
Linen Fish.....dis 25 & 10 %	
Wire Clothes, Galvanized, 100 feet.....dis 35.00	
CHANGES MADE IN LIST PRICE	
Cabinet, Eagle.....dis 25 & 10 %	
Cabinet, Gaylord.....dis 25 & 10 %	
Cabinet, Bridgeport.....dis 25 & 10 %	
Cabinet, P. & F. Corbin.....dis 25 & 10 %	
Trunk, new list, Jan 1, 1881.....dis 15 & 2 %	
Yale Lock Co., Flat Key.....dis 40 %	
Plate.....dis 33 1/2 & 2 %	
DOOR LOCKS, ETC.	
Bradford.....dis 14c. net	
Norwalk.....dis 17c. net	
P. & F. Corbin.....dis 17c. net	
Russell & Erwin.....dis 17c. net	
Mallory, Wheeler & Co.....dis 17c. net	
Padlocks—Russell & Erwin.....dis 66 1/2 %	
Mallory, Wheeler & Co.....dis 66 1/2 %	
Norwich Lock Manf. Co.....dis 5 % for cash.	
Wm. Wilcox & Co.....dis 33 1/2 %	
Yale Lock Manf. Co.'s "Standard".....dis 40 %	
Romer's.....dis 25 & 10 %	
Conestoga.....dis 75 %	
Scandinavian, "Norwich".....dis 50 & 10 %	
MALLETS.	
Penfield Block Co., Apple, Hickory and Lignumvite.....dis 30 %	
MEAT CUTTERS.	
Dixon's (P. S. & W.) Nos. 1 2 3 4.....dis 35 %	
Perry's, Nos. 1 2 3 4 5 6 7 8 9 10.....dis 35 %	
Woodruff's (P. S. & W.) Nos. 100 150.....dis 35 %	
Hales' Nos. 11 12 13.....dis 35 %	
Kieser's No. 55.....dis 45 & 10 %	
Kieser's Gem.....dis 45 & 10 %	
Kieser's No. 82.....dis 45 & 10 %	
Kieser's Monarch.....dis 45 & 10 %	
Beef Shaver, (Enterprise Manf. Co.).....dis 25 %	
MOLASSES GATES.	
Stebbins Patter's.....dis 70 & 10 %	
Stebbins Genuine.....dis 67 1/2 & 10 %	
Stebbins Tinned Ends.....dis 40 & 10 %	
Chase's Hard Metal.....dis 50 & 10 %	
Self-Measuring, (Enterprise).....dis 20 %	
Lincoln's Pattern.....dis 60 & 10 %	
Weed's.....dis 15 %	
Boss Nos. 1 2 3 4.....dis 15 %	
Boss, Janned Finish.....dis 60 & 10 %	
Boss, Bronze Finish.....dis 50 & 10 %	
NUTS AND WASHERS.	
Square Nuts.....8 c off list.	
Hexagon Nuts.....8 1/2 c off list.	
Washers.....7 1/2 c off list.	
WASHERS.	
Zinc and Tin.....dis 60 & 10 %	
Brass and Copper.....dis 50 %	
Malleable (Hammer's).....dis 50 %	
PINKING IRONS.	
Per dozen.....75 cts. net	
PLATING MACHINES.	
Astor Plating Machine.....each \$15, dis 20 %	
Crown Plating Machine.....each \$25, dis 25 %	
6 in., \$6; 10 in., \$8 each.	
PLANES AND PLANE IRONS.	
Bench, First Quality.....dis 20 %	
Bench, Second Quality.....dis 25 %	
Molding.....dis 15 %	
Bailey's (Stanley R. & L. Co.) New list, Jan. 1879.....dis 20 & 10 %	
The Stanley (S. R. & L. Co.) new list, January 1879.....dis 20 & 10 %	
Bailey's.....dis 20 & 10 %	
Plane Irons, Butcher's.....dis 20 %	
Plane Irons, Auburn Tool Co.....dis 20 %	
Plane Iron, Ohio Tool Co.....dis 20 %	
Plane Irons, Sandusky Tool Co.....dis 20 %	
PLIERS AND NIPPERS.	
Button's Patent.....dis 33 1/2 %	
Hall's Pat. Compound Lever Cutting Nippers, No. 2, 5 in. \$13.50; No. 4, 7 in., \$21.00; dis 25 %	
Gas Pliers.....dis 50 %	
PLUMBS AND LEVELS.	
Diston's.....dis 40 %	
Stanley R. & L. Co.'s Pat. Adjustable.....dis 60 & 10 %	
Stanley R. & L. Co.'s Non-Adjustable.....dis 60 & 10 %	
Chapin's Patent Adjustable.....dis 60 & 10 %	
Chapin's Non-adjustable.....dis 60 & 10 %	
Standard Rule Co.'s Non-Adjustable.....dis 60 & 10 %	
Standard Rule Co.'s Non-Adjustable.....dis 60 & 10 %	
Pocket Levels.....dis 65 & 10 %	
RAIL.	
Sliding Door, Wrought Brass.....dis 40 %	
Sliding Door, Bronze Wrt. Iron.....dis 35 %	
Sliding Door, Iron, Painted.....dis 35 %	
Barn Door.....dis 35 %	
Per 100 feet.....dis 35 %	
B. D. for N. E. Hangers.....dis 35 %	
Per 100 feet.....dis 35 %	
RIVETS.	
Iron and Tinned, new list, Dec. 10, 1881.....dis 40 %	
In bulk, new list, Dec. 10, 1881.....dis 40 %	
Copper Rivets and Burrs.....dis 50 & 10 %	
Nos. 7 8 9 10 11 12 13 14 15.....dis 50 & 10 %	
1/2 lb., 49c. 50c. 54c. 56c. 58c. 60c. 62c. 70c.	
RIVET SETS.....dis 40 %	
RODS.	
Stair, Brass.....dis 25 %	
Stair, Black Walnut.....dis 60c. doz. net	
RULES.	
Boxwood.....dis 40 & 10 %	
Ivory.....dis 40 & 10 %	
Standard.....dis 40 & 10 %	
Stanley.....dis 40 & 10 %	
Stevens & Co.....dis 40 & 10 %	
Stevens & Co. Miscellaneous.....dis 50 & 10 %	
SAD IRONS.	
Self-Heating, Charcoal.....dis 9.00 net	
Mrs. Pott's Irons.....dis 35 %	
Enterprise Star Irons, new list, July 20, '82.....dis 35 %	
Comb'd Fluter and Sad Iron.....dis 15 %	
Common Sad Irons.....dis 2 1/2 %	
SAND PAPER.	
Baeder & Adamson's Flint, 000 1/2.....\$4.50 r.m.	
Baeder & Adamson's Flint, 2, 2 1/2 & 3.....5.00 r.m.	
Baeder & Adamson's Flint, Assort'd 4-7 1/2 r.m.	
Baeder & Adamson's Star.....3.75 r.m.	
Baeder & Adamson's Emery r.m. \$6.50 11.50	
J. Bartle's Sand, Flint and Emery Paper.....dis 30 & 5 %	
SASH CORD.	
Common.....dis 14c. net	
Patent.....dis 17c. net	
Silver Braided Lake Hemp.....dis 50c. dis 10 %	
Silver Braided Lake White Cotton.....dis 50c. dis 10 %	
Silver Braided Lake Drab Cotton.....dis 50c. dis 10 %	
Silver Lake Cable Laid, Bengall Unbleached Hemp, 17 cts.....dis 10 %	
Russian Hemp, 10 cts.....dis 10 %	
Italian Hemp, 34 cts.....dis 10 %	
SASH WEIGHTS.	
Solid Eyes, in 500-lb. lots and over, 1 1/4 c. net	
SAUSAGE STUFFERS OR PILLERS.	
Miles.....dis 25 %	
Perry.....dis 25 %	

SILVER PLATED HOLLOW WARE.	
Wm. Rogers Manf. Co.....dis 40, 15 & 5 %	
Meriden Britannia Co.....dis 33 1/2 %	
SPOONS.	
Britannia.....dis 60 & 10 %	
Tinned, Iron, Table and Tea.....dis 65 %	
Tinned Iron Basting.....dis 65 %	
German Silver.....dis 40 %	
STONE.	
Hindostan No. 1, 3c.; Axe, 8c.....net	
Sand Stone.....dis 33 1/2 & 10 %	
Washita Stone.....No. 1, 1 lb., 16c. net	
Washita Stone, Slips.....No. 1, 1 lb., 45c. net	
Arkansas.....dis 50 %	
SQUARES.	
Steel.....dis 50 %; full cases, dis 50 & 10 %	
Iron.....dis 50 %; full cases, dis 50 & 10 %	
Nickel Plated.....dis 50 & 10 %	
Try Square and T Bevels.....dis 40 %	
Diston's Try Square and T Bevels.....dis 40 %	
TACKS, BRADS, & C.	
New List, Sept. 1, 1882.	
Tinned Swedes Tacks.....dis 50 %	
Tinned American Tacks.....dis 50 %	
Swedes Tacks, all kinds.....dis 50 %	
American Cut Tacks.....dis 50 %	
Copper Tacks and Nails.....dis 50 %	
Hungarian Nails.....dis 35 %	
Gimp and Lace Tacks.....dis 35 %	
Gimp and Lace Tacks, Tinned.....dis 35 %	
Finishing Nails.....dis 40 %	
Trunk and Clout Nails.....dis 40 %	
Common and Patent Brads.....dis 30 %	
Basket Nails.....dis 30 %	
Brush Tacks.....dis 20 %	
Leathered Carpet Tacks.....dis 20 %	
Cigar Box Nails.....dis 40 %	
Chair Nails.....dis 30 %	
Double-pointed Tacks.....dis 70 & 10 %	
TAP BORERS.	
Common and Ring.....dis 20 %	
Ives' Tap Borer.....dis 15 & 10 %	
Enterprise Mfg. Co.....dis 25 %	
TOBACCO CUTTERS.	
Enterprise Mfg. Co. (Champion).....dis 25 %	
Wood Bottom.....dis 40 & 10 %	
All Iron.....dis 40 & 10 %	
Wilson's.....dis 35 %	
THERMOMETERS.	
Tin Case.....dis 75 & 10 %	
Storm Glasses.....dis 25 %	
TOE CALKS.	
Winsted.....dis 5 %	
TRAPS.	
Game, Newhouse.....dis 35 %	
Game, Oneida Pattern.....dis 60 & 10 %	
Game, Blake's Patent.....dis 40 & 10 %	
Mouse, Wood, Choker.....dis 10 %	
Mouse, Round Wire.....dis 10 %	
Mouse, Cage, Wire.....dis 10 %	
Mouse, Catch-em-alive.....dis 10 %	
Cyclon Mouse.....dis 75 cts.	
Ideal Mouse.....dis 1.00	
Rat, "Decoy".....dis 1.00	
Delusion Mouse, per doz.....dis 1.50	
TROWELS.	
Lothrop's Brick and Plastering.....dis 25 %	
Reed's Brick and Plastering.....dis 15 %	
Disston's Brick and Plastering.....dis 20 %	
Clement & Maynard's.....dis 20 %	
Worral's Brick.....dis 20 %	
Brades & Walby's.....dis 20 %	
Garden.....dis 55 %	
TRUCKS (WAREHOUSE, & C.)	
Handy Truck.....dis 25 % net	
Penfield Block Co.'s list, 1882.....dis 35 %	
Peerless, with Cogs, No. 3.....dis 54.00	
Peerless, with Cogs, No. 4.....dis 60.00	
Eureka, No. 2.....dis 42.00	
VICES.	
Solid Box—Wilson's.....dis 50 %	
Trenton.....dis 45 %	
Iron City Tool Works.....dis 50 %	
Bench—Wilson's.....dis 45 %	
Trenton.....dis 25 %	
Parker's.....dis 25 %	
Prentiss.....dis 25 %	
Honey's.....dis 35 %	
Well Wheels.....dis 60 & 10 %	

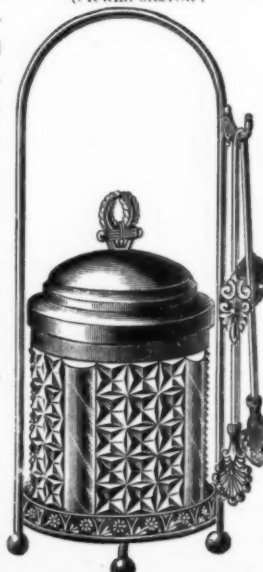
THE WM. ROGERS' MFG. CO.

Silver-Plated Table Ware,

We manufacture a complete line of Silver-Plated Table Ware of all descriptions, and should be pleased to send our Price-List or Catalogue to any reliable dealer.

We guarantee every piece of our ware to be just as represented. Our guarantee card accompanies each box of goods.

Our prices are as low as any First-Class Goods, and our goods are equal to any made in the country.



Trade Marks:
Wm. Rogers & Son.
 —AND—
1865 Wm. Rogers Mfg. Co.
 P. O. Address, Drawer 30,
HARTFORD, CONN.

WIRE.	
Brass and Copper, list of Jan. 17, 1884.....dis 15 %	
Bright and Annealed.....Nos. 0 to 18, dis 50 & 10 %	
Bright and Annealed.....Nos. 19 to 26, dis 60 & 10 %	
Bright and Annealed.....Nos. 27 to 36, dis 70 %	
Coppered.....Nos. 0 to 18, dis 50 %	
Galvanized, Nos. 0 to 18.....Market list dis 40 %	
Tinned, Nos. 0 to 18.....dis 60 %	
Tinned Broom Wire, Nos. 18 to 25.....dis 55 %	
Annealed Fence, Nos. 8 & 9.....dis 55 %	
Annealed Grape, Nos. 10 to 14.....dis 50 & 10 %	
Fence Staples, Galvanized.....dis 70 & 7 1/2 %	
Janned Barb Fence.....dis 60 %	
Galvanized Barb Fence.....dis 60 %	
Buck Thorn Galvanized.....dis 60 %	
Picture Wire.....dis 40 %	
Clothes Line Wire, Galvanized.....dis 75 %	
Wire (loth, green, drab and black).....dis 75 %	
WRENCHES.	
American Adjustable.....dis 45 %	
Haxter's Adjustable "S," list Jan., 1880.....dis 20 & 5 %	
Haxter's Diagonal.....dis 20 & 5 %	
Cos' Genuine.....dis 60 %	
Cos' "Mechanics".....dis 60 & 10 %	
Cos' Pattern, Malleable.....dis 75 %	
Cos' Pattern, Wrought.....dis 60 & 10 %	
Girard Standard.....dis 50 & 10 %	
Girard Agl.....dis 60 & 10 %	
Always Ready.....dis 50 %	
WRINGERS.	
Universal, XX, No. 2 1/2.....dis 36.00	
Universal, XX, No. 2.....dis 42.00	
Universal, XX, No. 1 1/2.....dis 51.00	
Universal, XX, No. 1.....dis 66.00	
Universal, XX, No. 8.....each 10.75	
Universal, XX, No. 12.....each 20.25	
Universal, XX, No. 18.....each 22.75	
Universal, XX, No. 22.....each 30.25	
Peerless, no Cogs, No. 1.....dis 42.00	
Peerless, with Cogs, No. 2 1/2.....dis 45.00	
Peerless, with Cogs, No. 2.....dis 48.00	
MISCELLANEOUS.	
"Diamond" Vegetable Grater.....dis 5.00 doz., 10 %	
Rotary Knife Potato Parer.....dis 18.00 doz., net	
Metallic Shingles.....dis 5.50 and 6.50 per square.	
Hopper Cherry Seeders.....dis 5.00 doz., net	

J. H. RATTENBANK, President.
 F. G. DUERR, Vice President.
 FRED BUSSIE, Sec'y & Treas'r.

THE U. S. VARNISH CO.
 CINCINNATI, OHIO.
 258 and 260 Colerain Avenue.
LARGEST VARNISH FACTORY in the WEST.
 CHICAGO BRANCH, 47 STATE STREET.
 Mention this paper.

W. L. MERSFELDER, MORGAN L. SMITH,
CINCINNATI PATTERN WORKS.
 Stove Patterns a Specialty.
 Artistic, Architectural and Machine Patterns
 Of Every Description Made on Short Notice.
 N. W. COR. FRONT & PIKE STS.
 Jobbing Promptly Done. CINCINNATI, O.

Send to **FARMVILLE MAN'G CO.**
 FOR PRICE-LIST OF
PLOW HANDLES,
 Beams and Rounds,
FARMVILLE, VA.

Established 1840. Incorporated 1884.
The Thom's Bradford Co.,
 Successors to
 THOMAS BRADFORD & CO.
 Manufacturers of the celebrated
 Bradford's Portable Under
 Runners Mills, for corn, wheat
 and middlings. First premium
 at Cincinnati Industrial Exposition,
 1884. Send for illustrated
 catalogue. Address plainly
 THE THOM'S BRADFORD CO., 174,
 176 & 178 W. Second St., Cin., O.

The Wm. Rogers Manufact'g Co.

MANUFACTURERS OF

Superior Electro-Silver-Plated Knives, Forks, Castors, Cake Baskets, &c.

Drawer 30, HARTFORD, CONN.



No. 551.
Silver, . . . each, \$1.50



No. 552.
Silver, . . . each, \$1.35



No. 703. Height, 7 1/2 inches.
Gold Lined Butter and Salt, . . . \$4.75
Gold Lined Butter, Salt and }
Napkin Ring, . . . 5.50



No. 550.
Silver, . . . each, \$1.50



No. 557.
Silver, . . . each, \$1.35

THE GRAND Automatic Brick MACHINE

Makes superior tempered
Brick for all purposes,
and is the only ma-
chine making a No.
1 Fire Brick.

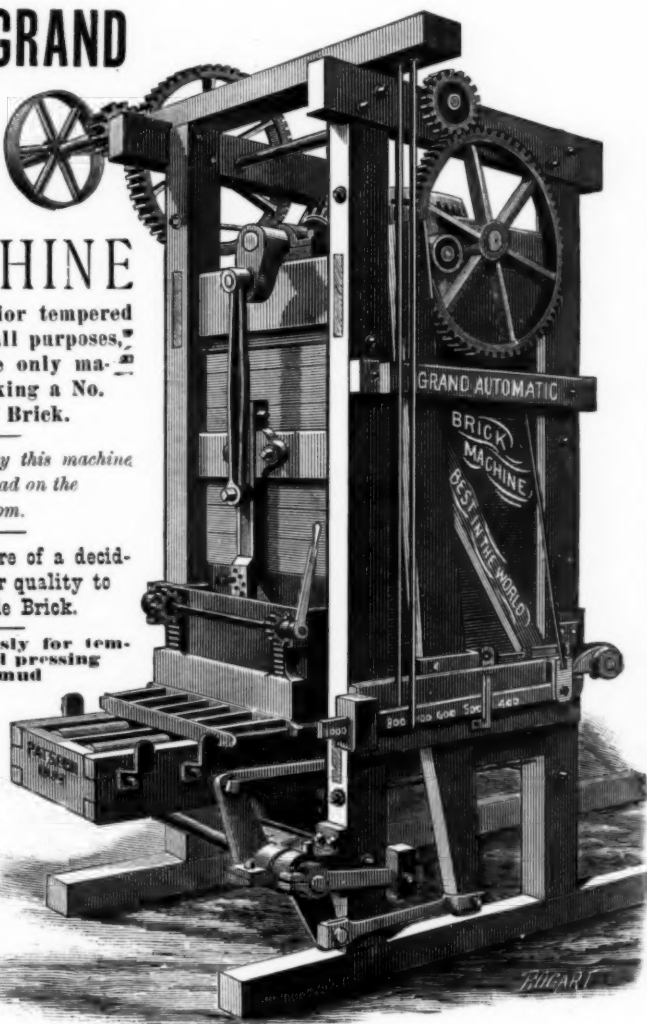
Bricks made by this machine
do not spread on the
bottom.

Its products are of a decid-
edly superior quality to
hand-made Brick.

Built expressly for tem-
pering and pressing
stiff mud

Every
machine
guaranteed.
Correspondence
solicited.

Send for
descriptive
catalogue,
containing
valuable
informatio
to



JONATHAN CREAGER,

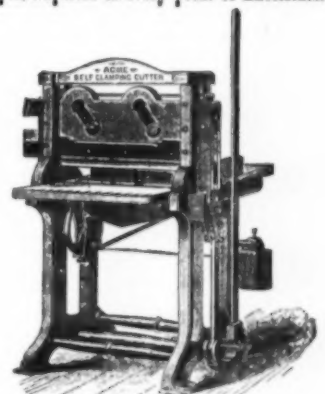
131 E. Front Street, - Cincinnati, O.

THE ACME SELF-CLAMPING PAPER CUTTERS,

Accurate, Durable and Strong, Saves Time, Very Rapid, Superior in every point of Excellence.

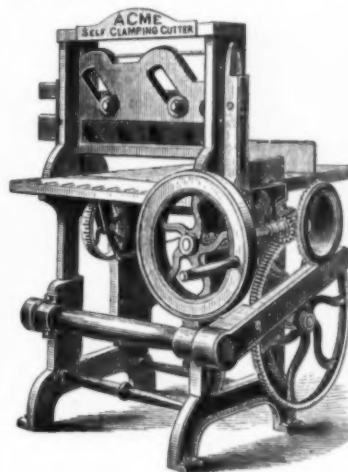
This line of cutters now enjoys the highest reputa-
tion for strength, power, durability, accuracy, sim-
plicity, convenience and a superior principle of opera-
tion, and they are used by the leading printers, book
binders, paper dealers, lithographers and paper manu-
facturers of the country. The essential features are

1. It is a perfect self-clamping cutter, clamping the paper and cutting at one operation, giving double the speed and saving one-half the work of cutting.
2. The clamp is made in two parts, the regular width being two and a half inches. Half of it may be taken off, allowing the back gage to come within one and one quarter inches of the knife, an invaluable feature for narrow work.
3. The back gage is moved by a metallic band (passing over a wheel) on which is also an indicator giving the exact distance from the edge of knife to back gage. The gage is moved very fast, with ease, and the indicator renders the operation of gaging absolutely certain.
4. A perfect system of side squares.
5. Economical and convenient round cutting sticks. Giving 50 cutting surfaces where there is only 8 on other makes.
6. A great number of little conveniences found in no other cutter. With every facility for taking up wear and adjusting correctly.
7. Thorough construction. Steel shafts are used on all, and cut geared in the larger machines, and everything of the best. Having the best machines in the world, the manufacturer will not cheapen the machine, and will guarantee them satisfactory, or they can be returned at his expense.



THE LEVER ACME.

Strongly made, gaged with an indicator, has side squares, and is warranted accurate. The lever is very long, giving the greatest power, and is made of wrought iron.

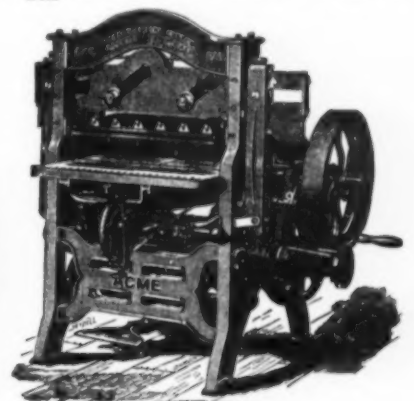


HAND WHEEL ACME.

Specially designed for those who require the heaviest work done, but have no steam power. It will cut any amount of paper that can be put under the clamp with the greatest ease, but is slower than the lever cutter. The balance wheel is in front, at the operator's right hand, and may be operated without change of position.

Prices, \$200 to \$1,500.

C. C. CHILD, 64 FEDERAL STREET, BOSTON, MASS., U. S. A.
Manufacturer of 40 sizes and styles of Acme Cutters, and 15 sizes and styles of Two-Revolution Cylinder Presses.



REGULAR ACME.

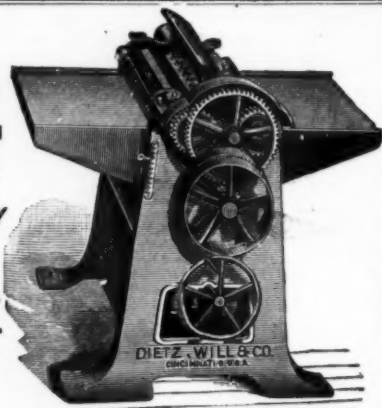
DOUBLE GEAR.
This machine is made very strong and heavy. Power is applied at both ends of the knife bar. Designed for the heaviest class of work. Unsurpassed by any first-class cutter made. Can be operated by hand with ease.
This cut shows the new Treadle Clamp recently applied to the Acme Cutters, by which the operator has the use of both hands while clamping the paper. A regular hand clamp may also be applied to any of these cutters if desired. Price of either style is \$75 extra.
Circulars giving full details and accurate engravings of the Acme Cutters will be sent on application.

DIETZ, WILL & CO. Wood-Working Machinery.

BAND SAWS, UNIVERSAL SAW
BENCH, SAW MANDRELS, PONY
PLANERS, MATCHERS.

Shafting, Pulleys and Hangers, Wood
Turning and Pattern Makers' Lathes.

186 to 191 PEARL STREET,
Cincinnati, O.



GUILD & GARRISON,

BROOKLYN, N. Y.

Steam Pumps,

VACUUM PUMPS, AIR COMPRESSORS.

SEND FOR CATALOGUE.

LAWRENCE & MENDENHALL,

Manufacturers' Agent,

Office, No. 55 West Fourth Street,
CINCINNATI, O.

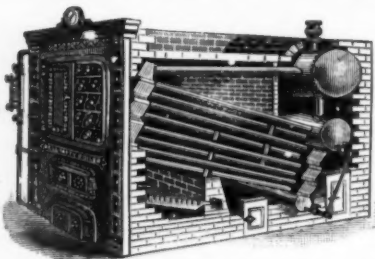
Hardware & Building Specialties
INTRODUCED AND SOLD.

—AGENT FOR—

Huginin Window Balance,
Hemacite Knobs,
North's Blind Awning Fixtures,
Wilber's Barn Door Hangers,
Raymond's Lead Weights,
Dudley Blind & Shutter Worker.

ZELL'S SAFETY BOILER.

Economy
Unexcelled,
Durability
Guaranteed.
Send for Circulars.



POSITIVELY
WILL NOT
EXPLODE.

—MANUFACTURED FOR THE—

SAFETY STEAM GENERATOR CO.

68 Warren Street, New York,

—BY—

PIONEER IRON WORKS, BROOKLYN, N. Y.

J. W. LOANE,

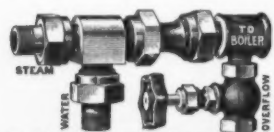
13 N. Gay Street, BALTIMORE.

Manufactures and sells at lowest rates

TENTS, AWNINGS, FLAGS

Canvas Horse Covers, Plain and Oiled,
Yellow and Black.

GIVE HIM A CALL. ORDERS OR ENQUIRIES
BY MAIL RECEIVE PROMPT ATTENTION.



INJECTORS

For all kinds of STEAM BOILERS.

DESCRIPTIVE
CATALOGUE
FREE.

RUE
MFG CO.
PHILAD'A



Bates' Hand Elevators.
Patented April 18, 1871. Reissued July 20, 1876.
OVER 6,000 IN USE.

Adapted for Warehouses, Stores, Factories,
Hotels, Public Institutions, and every place
where merchandise, &c., is transferred from one
story to another.

JAMES BATES, Patentee,

Nos. 1, 3 & 5 President Street, BALTIMORE.

Important to Southerners.

Persons arriving in New York via Cort-
landt Street Ferry, by taking the 6th Ave-
nue Elevated Train, corner Church and
Cortlandt streets, can reach the Grand Union
Hotel in 42d street, opposite Grand Central
Depot, in twenty minutes, and save \$3 car-
riage hire. If en route to Saratoga or other
summer resorts via Grand Central Depot, all
baggage will be transferred from hotel to this
depot free. 600 elegantly furnished rooms
\$1 and upwards per day. Restaurant the
best and cheapest in the city. Families can
live better for less money at this hotel than
at any other first-class hotel in the city. †

PAINTS, OILS, &c.

PAINTS.	
Black Lamp, coach painters.....	100
Black Lamp, ordinary.....	40
Black Ivory Drop, fair.....	12
Black Ivory Drop, best.....	15
Black Paint, in oil.....	60
Blue Prussian, fair to best.....	35
Blue Prussian, fair to best, in oil.....	35
Blue Chinese, dry.....	70
Blue Ultramarine.....	15
Brown, Spanish.....	10
Brown, Van Dyck.....	15
Green, chrome.....	8
Green, chrome, in oil.....	9
Green, Paris.....	20
Green, Paris, in oil.....	20
Iron Paint, bright red.....	10
Iron Paint, brown.....	10
Iron Paint, purple.....	10
Iron Paint, ground in oil, bright red.....	10
Iron Paint, ground in oil, red.....	10
Iron Paint, ground in oil, brown.....	10
Iron Paint, ground in oil, purple.....	10
Linseed Oil, raw.....	50
Single Boiled.....	50
Double.....	60
Mineral Paints.....	100
Orange Mineral.....	100
Red Lead, American.....	60
Red Venetian, (English) dry.....	10
Red Venetian, in oil.....	10
Red Indian, dry.....	10
Rose Pink.....	10
Sienna, American, raw.....	10
Sienna, burnt.....	10
Sienna, burnt, in oil.....	10
Umber, burnt.....	10
Umber, burnt, in oil.....	10
Umber, raw.....	10
Umber, raw, in oil.....	10
Vermilion, Chinese.....	100
Vermilion, English.....	100
Vermilion, American, common.....	100
White Lead, American, pure dry.....	60
White Lead, American, pure in oil.....	60
White, Paris, English, prime.....	10
Yellow Ochre, French.....	10
Yellow Ochre, French, in oil.....	10
Yellow Ochre, American.....	10
Yellow Chrome.....	10
Yellow Chrome, in oil.....	10
Zinc White, American, No. 1, dry.....	10
Zinc White, American, No. 1, in oil.....	10
Zinc White, French (Paris) dry.....	10
Zinc White, French in oil.....	10

OILS.	
Bleached W. Sperm oil.....	100
Nat.....	100
B. W. Elephant oil.....	75
Whale oil.....	70
Prime Lard oil.....	60
Extra No. 1 Lard oil.....	60
Lubricating oil.....	100
Miners' oil.....	100
W. Pressed Fish oil.....	100
Neatsfoot oil.....	100
Steam-refined Cylinder oil.....	100
Best Filtered.....	100
Signal oil.....	100
Paraffine.....	100

SUNDRIES.	
Benzine.....	100
Turpentine.....	100
Chalk.....	100
Chalk, block.....	100
Dryer patent Am'n.....	100
Frostings.....	100
Glue, white.....	100
Glue, sheet.....	100
Glue, ordinary.....	100
Glaziers' Points, zinc.....	100
Gum, Copal.....	100
Gum, Damar.....	100

Carriage and Wagon Material

AXLES.	
Half Patent, solid collar.....	100
Common.....	100
Concord.....	100
BODY LOOP ENDS.	
Plain, set.....	100
Bolts, Eagle.....	75
CLIPS.	
Superior Axle.....	100
Norway.....	100
Saddle.....	100
FINISHED CLIP KING BOLTS.	
Flanged, 1/2 doz.....	100
Leather, new list.....	100

ENAMELED CLOTHS.	
Muslin, 1/2 yard, 5-4.....	18
Drill, " 50 in.....	24
Duck, " 50 in.....	29
Tan Back, " 5-4.....	32
FELLOE PLATES.	
Per lb.....	8
FIFTH WHEELS.	
Derby, 1/2 doz.....	7 50
" 3/4, ".....	8 50
RUBBER DUCK AND DRILL—35 % off list.	
SPRINGS.	
Seat, 1 1/2 x 2 1/2, 1/2 pair.....	90
Buggy, 1 1/2 in. and larger.....	8
1 1/2 to 1 3/4 in.....	9
Oil-tempered springs 2c. advance from above.	
SHAFT COUPLINGS.	
Discount.....	50 %
MALLEABLE CASTINGS.	
Rate.....	8
Core.....	12
FOLE EYES AND COUPLINGS.	
Discount.....	40 %
H. B. LEATHER.	
No. 1 Top, 1/2 ft.....	28
" " ".....	23
" 1 Dash, ".....	12
" 2 " ".....	10
Fancy Morocco, 1/2 ft.....	20
Bow, 1/2 ft.....	24
Collar, ".....	24
Harness, 1/2 lb.....	40
STEP PADS.	
Per doz. pair.....	25
Spokes, No. 1, 1 to 1 1/2.....	25
" " ".....	25
" " ".....	25
" " ".....	25
Wheels, Sarven Patent.....	50
HICKORY FELLOES.	
X.....	1 1/2
XX.....	1 1/2
HICKORY SPOKES.	
No. 1.....	1 1/2
XX.....	1 1/2
HUBS.	
No. 1.....	5x7 6x8 7x9 8x10
XX.....	5x7 6x8 7x9 8x10
FINISHED SHAFTS AND BARS.	
X.....	4 50
XX.....	7 00 doz. pairs

IRON WORKING MACHINERY.

NEW.

1 Engine Lathe, each 10, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 28, 30, 35, 42 and 48 in. swing; length of bed to suit.	
1 Fox Turret Lathe, each 13, 15 and 16 in. swing; 5 ft. bed.	
1 Sq. Arbor Fox Lathe, 15 in. x 6 ft.	
1 each, Hand Lathes, 10, 12, 14, 15 and 18 in. swing.	
1 Iron Planer, each to plane 18, 20, 22, 24, 26, 30 and 36 in. wide and high; length of table to suit.	
1 each 16, 20, 22, 23, 25, 28, 30, 34, 38 and 42 in. swing. Upright Drills.	
1 each, 3, 4 and 6 Spindle Gang Drills.	
1 each 8, 10, 12, 15, 20 and 28 in. Shapers.	
1 No. 2 Milling Machine. Lincoln Pattern.	
1 Grant & Bogert Milling Machine.	
1 each, Nos. 2, 4 and 5 Screw Machines.	
1 each, 3 and 7 Spindle Nut Tapper.	
1 Boring and Turning Mill, each 50 and 72 in. swing.	
1 Cutter Grinder.	
1 12 in. and 24 in. Cylinder Horizontal Engine.	
1 each 4, 5 and 6 ft. Arm Universal Radial Drills.	
1 Pat. Makers Lathe, 25 in. x 12 ft. between centres.	
1 Grant's New Universal Miller.	
1 Pr. Bending Rolls for 1/2 in. x 60 in. plates.	

SECOND-HAND.

1 Engine Lathe, each 18 in. x 8 ft. Good as new.	
1 " " 22 x 10 ft. At order.	
1 Iron Planer, 20 x 20 x 4 ft. At order.	
1 " " 24 x 24 x 5 ft. " "	
1 " " 30 x 30 x 7 ft. " "	
1 " " 32 x 30 x 9 ft. " "	
1 40 lb. Bradley Hammer.	
1 Lincoln Pattern No. 2 Miller.	
1 36 in. Gear Cutter.	
1 Horizontal Boring Machine; takes 6 ft. between centres; 36 in. swing.	

All kinds Machinists' Tools and Supplies.

New York Agency of the Tanite Co.

Grant & Bogert Machine Tool Works.

AND FOR THE

"New Polished" Shafting.

H. PRENTISS & CO.

42 Dey Street, New York.

PATENTS
PROCURED.
REJECTED APPLICATIONS
AMENDED & PROSECUTED
INVENTORS DRAWINGS MADE.
NO MODEL REQUIRED
HURDLE & STEIGER
TRIBUNE BLDG. N. Y.



MACHINISTS

and others should examine
the merits of our new im-
proved 14x40 inch Screw
Cutting Lathe. Price \$175.
Descriptive price-list of
lathes and tools mailed on
application.
SEBASTIAN, MAY & CO.
120 W. Pearl St., Cincinnati, O.

A New Farm Fence.

A farm fence should be cheap, ornamental and useful; it should be visible so that stock cannot be harmed by running into it and then having some of it running into them; it should protect sheep from dogs, wolves, and other carnivorous fiends; it should be durable, and finally, it should be so easily put up that a country lad can put it up intelligently.

The "Picket Wire Fence" seems to meet all these requirements. It has wooden pickers about 4 or 4½ feet long placed perpendicularly, with 5 heavy wires crossing them horizontally and holding them securely in place. The picket and wires are placed so closely together that a fair sized dog cannot get through the interstices. It costs no more than a plank fence and it lasts three times as long. It is put up in rolls or bales 70 feet long and is easily handled.

The Covington Picket Wire Fence Co., No. 620 Scott street, Covington, Ky., can give you prices and further information.

BRASS.

ROLL AND SHEET BRASS.

Brown & Sharpe's Gauge the Standard.
New List, Jan. 17, 1884.
Dis 25%

COMMON HIGH BRASS.		10	12	14	16	18
Wider than	and including.	10	12	14	16	18
To No. 20, inclusive.	.21	.22	.23	.25	.27	.29
Nos. 21, 22, 23 and 24.	.22	.23	.24	.26	.28	.30
Nos. 25 and 26.	.23½	.24½	.26½	.28½	.31	
Nos. 27 and 28.	.23	.24	.25	.28	.30	.32
Add 9 cts. per lb. for sheets cut to particular widths and lengths.						
Add ½ c. per lb. additional on each number thinner than Nos. 28 to 38 inclusive.						
Brass thinner than No. 38 is Platers' Brass.						
Printers' rules.						.55 cts.
Printers' Sheets and Plates cut to particular sizes and lengths to No. 20, inclusive.						.45 cts.
Brass, Spinning and Spring Brass, one cent more than common High Brass.						
Low Brass four cts. per lb. more than common High Brass.						
Gilding, Oreide and Bronze seven cts. per lb. more than common High Brass.						

SLITTING METAL.

Add to list as follows:

Over ½ in. to 2 in., inclusive, Nos. 12 to 20, inclusive.	1/4c.
Over ¼ in. to ½ in., inclusive, Nos. 12 to 20, inclusive.	1/4c.
Over ¼ in. and narrower, not less than 1/8 in., inclusive.	1/4c.
Over ¼ in. to 2 in., inclusive, Nos. 21 to 28 inclusive.	1/4c.
Over ¼ in. to ½ in., inclusive, Nos. 21 to 28, inclusive.	1/4c.
¼ in. and narrower, Nos. 21 to 28, inclusive, not less than 1/8 in., inclusive.	1/4c.
Over ¼ in. to 2 in., inclusive, Nos. 29 to 32, inclusive.	1/4c.
Over ¼ in. to ½ in., inclusive, Nos. 29 to 32, inclusive.	1/4c.
¾ in. and narrower, Nos. 29 to 32, inclusive, not less than 1/8 in., inclusive.	1/4c.
Over ¼ in. to 2 in., inclusive, No. 33 and thinner.	1/4c.
Over ¼ in. to ½ in., inclusive, No. 33 and thinner.	1/4c.
¼ in. and narrower, No. 33 and thinner, not less than 1/8 in., inclusive.	1/4c.
Slit Metal cut to particular lengths, per lb. additional.	1/4c.

PLATERS' OR GOLD METAL.

In bars.	40c.
In ingots.	42c.
In ingots, planed or polished.	46c.

WIRE IN COILS.

Old English gauge the Standard.

	Common High Brass.	Low Brass.	Gilding, Bronze and Copper.
All Nos. to No. 16, inclusive.	.22	.26	.30
Nos. 17 and 18.	.23	.27	.31
" 19 and 20.	.24	.28	.32
" 21.	.25	.29	.33
" 22.	.26	.30	.34
" 23.	.27	.31	.35
" 24.	.28	.32	.36
" 25.	.29	.33	.37
" 26.	.30	.34	.38
" 27.	.31	.35	.39
" 28.	.32	.36	.40
" 29.	.33	.37	.41
" 30.	.34	.38	.42
" 31.	.35	.39	.43
" 32.	.36	.40	.44
" 33.	.37	.41	.45
" 34.	.38	.42	.46
" 35.	.39	.43	.47
" 36.	.40	.44	.48
" 37.	.41	.45	.49
" 38.	.42	.46	.50
" 39.	.43	.47	.51
" 40.	.44	.48	.52
" 41.	.45	.49	.53
" 42.	.46	.50	.54
" 43.	.47	.51	.55
" 44.	.48	.52	.56
" 45.	.49	.53	.57
" 46.	.50	.54	.58
" 47.	.51	.55	.59
" 48.	.52	.56	.60
" 49.	.53	.57	.61
" 50.	.54	.58	.62
" 51.	.55	.59	.63
" 52.	.56	.60	.64
" 53.	.57	.61	.65
" 54.	.58	.62	.66
" 55.	.59	.63	.67
" 56.	.60	.64	.68
" 57.	.61	.65	.69
" 58.	.62	.66	.70
" 59.	.63	.67	.71
" 60.	.64	.68	.72
" 61.	.65	.69	.73
" 62.	.66	.70	.74
" 63.	.67	.71	.75
" 64.	.68	.72	.76
" 65.	.69	.73	.77
" 66.	.70	.74	.78
" 67.	.71	.75	.79
" 68.	.72	.76	.80
" 69.	.73	.77	.81
" 70.	.74	.78	.82
" 71.	.75	.79	.83
" 72.	.76	.80	.84
" 73.	.77	.81	.85
" 74.	.78	.82	.86
" 75.	.79	.83	.87
" 76.	.80	.84	.88
" 77.	.81	.85	.89
" 78.	.82	.86	.90
" 79.	.83	.87	.91
" 80.	.84	.88	.92
" 81.	.85	.89	.93
" 82.	.86	.90	.94
" 83.	.87	.91	.95
" 84.	.88	.92	.96
" 85.	.89	.93	.97
" 86.	.90	.94	.98
" 87.	.91	.95	.99
" 88.	.92	.96	1.00
" 89.	.93	.97	1.01
" 90.	.94	.98	1.02
" 91.	.95	.99	1.03
" 92.	.96	1.00	1.04
" 93.	.97	1.01	1.05
" 94.	.98	1.02	1.06
" 95.	.99	1.03	1.07
" 96.	1.00	1.04	1.08
" 97.	1.01	1.05	1.09
" 98.	1.02	1.06	1.10
" 99.	1.03	1.07	1.11
" 100.	1.04	1.08	1.12

BRASS TUBING.

Brown & Sharpe's Gauge the Standard for all Tubing.		Per lb.
Plain, to No. 20, inclusive.		35
Above 5-16 inch to 3 inches, inclusive.		45
Plain, to No. 21, above 3 inches.		45
" 5-16 inch to No. 20.		45
" ¾ inch.		60
" ¾ inch.		60
" ¾ inch.		1.00
" ¾ inch.		1.50

Brown & Sharpe's Gauge the Standard for all Tubing.		Per lb.
Plain, to No. 20, inclusive.		35
Above 5-16 inch to 3 inches, inclusive.		45
Plain, to No. 21, above 3 inches.		45
" 5-16 inch to No. 20.		45
" ¾ inch.		60
" ¾ inch.		60
" ¾ inch.		1.00
" ¾ inch.		1.50

Bronze Tubing 3 cents per pound more than Brass. Nos. 21, 22, 23, two cents advance on list for each number.
Nos. 24, 25, 26, four cents advance on list for each number.
Above No. 26, special rates.
All Mandrel-drawn Tubes, ¾ inch and above, five cents advance on list prices.
All Mandrel-drawn Tubes under ¾ inch, twenty-five cents per pound advance on list prices.
Fancy Tubing to No. 20. \$0.43
English, Scotch and Extra Pattern Fancy Tubing to No. 20. 48
Tubing sawed or cut, 2 to 4 feet long, one cent advance on list.
Add to one cent one-half cent for each additional cutting under two feet.

METALS.

TIN PLATES.

BLOCK TIN.

"Lamb and Flag," and "Straits."

Large Pigs.	19
Small Pigs.	20
Bars.	25

TINNERS' SOLDER.

No. 1 Refined.	13
Market Half-and-Half.	15
Strictly Half-and-Half.	16

ROOFING PLATS.

IC, 14x20, Choice Charcoal Terne.	5 50
IC, 14x20, " " " "	7 75
IC, 20x28, " " " "	11 00
IC, 20x28, " " " "	14 50
IC, 20x28, Extra fine quality, charcoal roofing, genuine "old style" redipped.	14 00
IX, 20x28, " " " "	18 00

COKE PLATES.

IC, 10x14, bright, "B. V." grade.	5 00
IC, 14x20, " " " "	5 00
IX, 14x20, " " " "	7 00
IC, 10x20, Gutters.	9 00

SHEET METAL.

In cases of 600 lbs., per lb.	5 1/2
In smaller quantities, per lb.	6

TIN PLATES.

IC, 10x14, Charcoal.	6 00
IX, 10x14, " " " "	8 00
IC, 12x12, " " " "	6 20
IX, 12x12, " " " "	8 20
IC, 14x20, " " " "	6 00
IX, 14x20, " " " "	8 00
IC, 14x20, " " " "	10 00
IX, 14x20, " " " "	12 00
IC, 14x20, " " " "	14 00
IX, 14x20, " " " "	16 50
DC, 100, Plate.	6 00
DX, 100, " " " "	8 00
DX, 100, " " " "	10 05
DX, 100, " " " "	12 05

RABBIT METAL.

No. 1 Ordinary.	15
Antimony.	9
Excelsior Rabbit Metal, No. 2.	10
" " " "	9

LEAD.

Pig.	4 1/2
Bar, (15 oz. bars).	6 1/2
Sheet.	7 1/2
Pipe, full coils.	6 1/2

COFFER.

Tinned Sheathing, 14x48, 14, 16, 18 oz.	25
" " " " " " " "	35
" " " " " " " "	37
Cooper Pit Bottoms.	25
Finning Extra.	15
Brassier's Copper, 15 to 100 lb.	26
" " " " " " " "	28
" " " " " " " "	30
" " " " " " " "	32
Bolt.	25
Tinning extra.	40

A Fine Opportunity for Investment.

The Plymouth Iron Works combined with Perry's Hame and Baluster Works for Sale.

These works are situated in the town of Plymouth, N. C., and are doing a good business. Owing to a change in my business, which prevents my giving them my personal attention, I offer them for sale. Will sell reasonable and give good time on a part of the purchase money. Write for descriptive circular, with price and terms. Address,

T. A. PERRY,
Plymouth, N. C.

WANTED

Situation as manager or salesman in a woolen factory, by a gentleman who has had over 26 years experience in the manufacture of plain and fancy dress goods, linings and worsted coatings.

Address, Box 76,
Post Office, Warrenton,
FAUQUIER CO., VA.

FOR SALE.

100,000 ACRES COAL, IRON ORE, AND
TIMBER LANDS IN ALABAMA,
ARKANSAS, TENNESSEE.

W. R. STUART,
NEW ORLEANS.

Business Chances.

For the purpose of making the MANUFACTURERS' RECORD a still more valuable medium of communication between its readers North and South, we will publish, FREE OF CHARGE, short advertisements, not exceeding 40 words, from those in the South who have mills, factories, manufacturing sites or water-power for sale, capital wanted for industrial enterprises, &c., &c.; while readers in other sections who desire to engage in manufactures at the South are also invited to use these columns, without cost, either in seeking information regarding the advantages and special claims of different localities, or for asking about good openings for men and money. This department is also free for Southern manufacturers who wish to advertise for mill managers, superintendents, engineers, &c.

In corresponding with any of these advertisers please mention the Baltimore Manufacturers' Record.

THE OWNERS of a cotton mill in the South want an experienced man to take an interest in the mill, and take charge of same as manager. The officers and other stockholders have had no experience in running cotton factories, and besides, their time is so fully taken up with other business, that they can not give personal attention to management of the finances or to the sale of the product. Machinery all new, and of the latest improved patterns. The mill is located in a flourishing and rapidly-growing city, with 6 railroads, and river navigable all the year. Coal is laid at the furnace door for \$1.70 per ton. It is desired that the manager shall have some interest in the mill, and no proposition will be entertained unless the party can put in at least \$10,000. Address A. C. M., care MANUFACTURERS' RECORD.

THE ADVERTISER desires to locate in some Southern town and engage in the manufacture and sale of bottled soda and mineral waters. Would like to be furnished with the names of places needing such an industry, with some information as to their attractions and advantages. Address SODA, care MANUFACTURERS' RECORD.

WANTED.—Partner with \$2,000 or more to engage in the manufacture of furniture. Factory buildings complete; trade established; lumber convenient; shipping point good; railroad runs through the yard; water also. The advertiser will go in as a partner, furnishing \$800 towards capital, or will work on salary in former capacity (superintendent) or as a hand. Address J. W. G., care MANUFACTURERS' RECORD.

WANTED.—Situation as superintendent of cotton factory; now employed in the South; satisfactory reasons for leaving present place; good references. Address N. C., care MANUFACTURERS' RECORD.

THE ADVERTISER desires to furnish a part of the capital, and join others in starting an oil mill and an ice factory in some good locality in the South.—Address Columbus, care MANUFACTURERS' RECORD.

WOOLEN MANUFACTURERS.—The undersigned desires to take the entire management of some good woolen mill in the Southern States, (has had 30 years' practical experience,) or would take charge of the finishing department alone. Address P. M. Smith, Auburn, Mass.

FORTY-THOUSAND dollar cotton mill for sale in South Carolina, for division, containing 500 acres of land, merchant grist and saw mills and gin, all in good running order. For health and natural advantages not excelled in the South. Address W. L. Morgan, Bros. & Co., Crawfordville, Spartanburg Co., S. C.

WANTED.—Situation by a young man as mechanical draughtsman, with patent solicitor, machine shop, mechanical engineer or draughtsman. Graduate of scientific college, engineering and machine shop experience. Reference given. Address S. S. Salter, Boston, Mass.

WANTED.—A man whom has 5 or 6 year's experience with handle and spoke machinery. Address Dickson & Watson, Pulaski, Tenn.

WANTED.—A hand power brick press that will make good bricks from damp clay. I must have a guarantee that the machine will do good work; want to know the capacity, price, terms, &c. Address W. J. Davis, box 104, Wytheville, Va.

I HAVE a good steam flour mill in Tennessee well located and doing a good business. My health is bad and it has become necessary for me to withdraw from business, and I wish to dispose of the mill; will sell a small or large interest, or the whole of it; or will lease; or will put it into a stock company and take a good share of the stock; or will sell on long time with a few hundred dollars down. A splendid business can be built up. Address E. R., care MANUFACTURERS' RECORD.

PARTNER WANTED.—To engage in a manufacturing enterprise near Atlanta, Ga. To a man with \$5,000 or \$10,000 to invest, and become identified with the management, this is a splendid opportunity. For full particulars, address Manufacturer, drawer 8, Atlanta, Ga.

SITUATION as superintendent of cotton mill in the South wanted by a gentleman of practical experience. No objection to being in the country. Best of references. Address J. B., care MANUFACTURERS' RECORD.

FOR SALE.—The Blue Grass Roller Mills. New 100 barrel full roller mill, complete in every respect; best wheat elevation in State; attached capacity 30,000 barrels. This property can be bought at a great bargain. Parties owning are all engaged in other business. For full particulars, address Blue Grass Roller Mill, North Middletown, Ky.

WANTED.—By a married man a situation as overseer of weaving in a woolen mill; would prefer to go South; has had 18 year's experience on all kinds of plain and fancy cassimeres and fine worsteds. Good reference as to ability and character. Address Weaver, care MANUFACTURERS' RECORD.

WANTED.—By a married man, a situation as overseer of spinning in a woolen mill; have had 13 year's experience on fine and coarse stock, and thoroughly understands all makes of Self-operating Mules and Jack Heads. Can furnish first-class reference; would prefer to go South. Address Spinner, care MANUFACTURERS' RECORD.

FOR SALE.—3½ acres of land in half mile of the growing town of Warrior, Ala. About 40 acres cleared; 2 good springs; coal under 73 acres. Great bargain. For further particulars, call on or address S. C. Davidson, Warrior, Ala.

FINE OPENING for an iron foundry. A practical man with character and capital will receive substantial aid. Address W. R. S., care MANUFACTURERS' RECORD.

VALUABLE WATER POWER for sale cheap; suitable for most any manufacturing business. This is a pleasant town of 2,000 inhabitants, and for climate and health cannot be excelled in the United States. Several kinds of manufactures needed here. Address Willard & Son, Maryville, Tenn.

WANTED.—A partner to take half interest in a two press cotton-seed oil mill and cotton mill, or will sell out. Can add other machinery. Good healthy locality. Address W. E. Yancey, Talladega, Ala.

WANTED.—A party to join me with some capital in a well established cotton gin factory in the South. The gins have no superior. Margins good. Water power used. Timber cheap and abundant. Address "Gin Factory," care of MANUFACTURERS' RECORD, Baltimore.

BANK WANTED for the town of High Point, N. C. Has two tobacco factories, three sash and door factories, one spoke and shuttle block factory, three cotton factories, one steam grist mill. Population twelve hundred. No banking facilities within fifteen miles. Address E. A. Snow & Co., High Point, Guilford county, N. C.

A DRAUGHTSMAN and Practical Machinist wants a position; capable of managing men, designing and constructing machine and special tools, engines, pumps, &c., sugar and mill machinery, &c. Willing to go anywhere. Good references. Address J. S. G., care of MANUFACTURERS' RECORD, Baltimore, Md.

WANTED.—Purchaser for 2,500 acres woodlands, including thousands of the finest fancy timbers to be had in the United States, such as walnut, white oak, ash, maple, cypress, pine, hickory, &c. Unsurpassed facilities for shipping lumber to market. Address Mrs. A. C. Watts, Laurens C. H., S. C.

COAL LAND FOR SALE.

One of the most desirable coal properties in the South can be bought at an extremely low price. It is located in the great coal district of Birmingham, Ala., and is only two to three miles from that city. It consists of 2,800 acres of Coal Land in fee, and mineral rights, and 1,400 acres under favorable lease for 20 years. There are three good openings on the land—a large seam 7 feet 4 inches thick (coking coal), another 4 feet 2 inches thick, and another 4 feet; two good steam and coking coals, and one good grate coal. A railroad, 5 miles in length along the entire length of the outcrop, would connect the Louisville & Nashville, and Georgia Pacific Railroads. This is one of the finest opportunities ever offered for investment in coal mining in the South.

For particulars address
BIGSBY & EDMONDS,
Baltimore, Md.

IRON ROOFING
SIDING, CEILING,
ARCHES AND LATH.
CINCINNATI
CORRUGATING CO.
CINCINNATI, O.
SEND FOR ILLUSTRATED CATALOGUE.

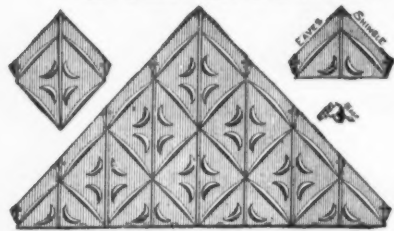
CORRUGATED

CRIMPED

T. C. SNYDER & CO.
—MANUFACTURERS OF—
IRON ROOFING, SIDING AND CEILING,
(The H. W. Smith Patent is the Best in use.) AND JOBBERS IN
PLAIN, CORRUGATED, CRIMPED, BEADED. IRON ORE, PAINT, CEMENT, And Roofers' and Builders' Papers.

—PATENT CALAMINED IRON IN QUANTITIES—A New Thing.—
Coating is indestructible, will not scale, is soft, solders more strongly and is superior to Galvanized Iron or Tin for all purposes. Protected both in body and surface. Circulars, Price-List and Sample mailed at request.
—CANTON, OHIO.—

Metallic Shingles FOR ROOFING OR SIDING.



UNSURPASSED BY ANY ROOFING
NOW ON THE MARKET.

**Guaranteed Storm-Proof
in Every Climate.**

Send for circular and prices of our Celebrated
Dove Tail Tin and Copper Shingles and
Iron-Clad Roofing Plates.

Anglo-American Roofing Co., 22 Cliff St., N. Y.

Works: Scottsdale, Pa. Brooklyn, N. Y. Wolverhampton, England.
JNO. G. HETZEL & SON, BALTIMORE AGENTS.

METALLIC SHINGLES. IRON ROOFING AND SIDING

—Crimped and Corrugated—



W. G. HYNDMAN & Co.

52 & 54 East Second Street,
CINCINNATI, O.

—FOR—
**DWELLINGS, STORES,
SAW MILLS, BARNs,
FACTORIES, SHEDS,
Etc., Etc., Etc.**

Send for Circulars and Prices.
Mention this paper.

CHATTANOOGA PAINT CO.

Chattanooga, TENN. S. B. LOWE, MANAGER.

MANUFACTURERS OF THE

Best Iron Paint in the Market,

Both Dry and Ready-Mixed, for the Protection of Iron, Tin or Shingle Roofs, Out-buildings, Railroad Cars, Iron or Wooden Bridges, Gas Receivers, and machinery of all kinds, Iron Stacks and all property exposed to the weather. Our dry is furnished in barrel, ton or car-load lots, and our ready-mixed in one and two-gallon cans, half-barrels and barrels. Merchants buying 50 gallons or over in cans can have their special label put on if desired. WE GUARANTEE OUR DRY AND READY-MIXED PAINT EQUAL TO ANY IN THE MARKET.
For prices, address

CHATTANOOGA PAINT CO., Chattanooga, Tenn.

Hoisting Engines

Of any Power, Double and Single, with



Improved Patent Friction Drums,
Especially adapted for Bridge Building, Dock Building, Pile Driving, Coal Hoisting, Quarries, Mines, etc.

STAMP MILLS
OF ANY SIZE FOR MINES.

J. S. MUNDY

22 & 24 Prospect St.

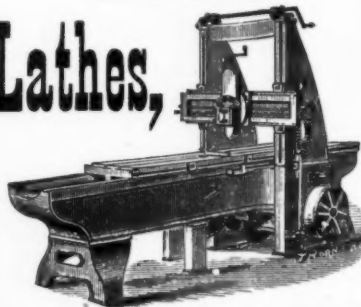
Newark, N. J.

Established 1867.

E. HARRINGTON, SON & CO.

MANUFACTURERS OF

Lathes,



Iron Planers, Boring Mills, Radial, Upright, Suspension Multiple, Level, Carriage Makers, Blacksmiths' Hand and Powers Post Drills, and a variety of other Machinists' Tools. PATENT DOUBLE CHAIN SCREW PULLEY BLOCKS, unrivalled for durability, safety and power. PATENT DOUBLE CHAIN QUICK-LIFT HOISTS, with brake for quick and easy lowering. Circulars furnished.

Works and Office, North 15th St. and Penn Avenue,
PHILADELPHIA, PA.

COLUMBIA BICYCLES
THE POPULAR STEEDS OF TODAY
COLUMBIA TRICYCLES
FOR LADIES AND GENTLEMEN.
ILLUSTRATED CATALOGUE SENT FREE.
THE POPE MFG. CO.
597 WASHINGTON STREET.
BRANCH HOUSES: BOSTON, 12 WARREN ST. NEW YORK, 178 MICHIGAN AVE. CHICAGO, ILL.



—THE—
Sigourney Drill.

Perfect, Sensitive and Strong.
Interchangeable, and has a Capacity unequalled.

MADE BY

The Sigourney Tool Co.

MANUFACTURERS OF
Special Machinery and Tools
OF THE FINEST QUALITY.

HARTFORD, - CONN.

Baltimore Agents, Morton, Reed & Co., 58 German Street.
Send for Circular.

—ESTABLISHED 1865.—

Steam Boilers

JOHN T. COLEMAN & SONS,
Steam Boiler Works,

Cor. Holliday and Pleasant Sts., Baltimore.

Manufacturers of all kinds of Steam and Bath Boilers, Smoke Stacks, Water Tanks, Lard Kettles, &c.
Particular attention given to repairs.

ENGRAVING DIRECT FROM PHOTOGRAPH.
NO DRAWING REQUIRED.

NO HAND WORK NECESSARY.
SEND CHEAP, ARTISTIC.
FOR PARTICULARS: CROSSCUP & WEST ENG. CO.
702 CHESTNUT ST. PHILA. PA.

Sherman Mfg. Co. JACKSON, TENN.



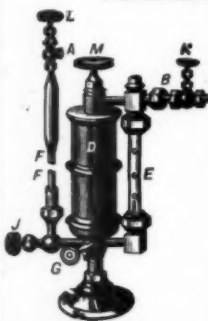
Manufacturers of the Lovrien Cube Pipe Tongs. Patented 1880 and 1881. The best and cheapest pipe tongs in the world. One pair has a wearing capacity equal to twelve pair of any other tongs. Requires but one-half the number of tongs to do the same work that is required by any other tongs. Every pair warranted. We are the only authorized manufacturers of these tongs in the U. S. We also manufacture Engines, Boilers, Saw Mills, and Saw Mill Machinery, Pulleys, Shafting, Hangers, &c. Correspondence respectfully solicited.

Scribner's Lumber and Log Book.

OVER ONE MILLION SOLD. Most complete book of its kind ever published. Gives measurement of all kinds of Lumber, Logs, Planks, Scantling; cubic contents of square and round Timber; hints to lumber dealers; wood measure; speed of circular saws; care of saws; cordwood tables; felling trees; growth of trees; land measure; wages, rent, board, interest, stave and heading bolts, etc. Standard book throughout the United States and Canada. New illustrated edition 1882. Ask your bookseller for it. Sent post-paid for 35 cents.
G. W. FISHER, Box 238, Rochester, N. Y.

The Seibert Cylinder Oil-Cup Co.

SOLE MANUFACTURERS OF



Oil Cups for Locomotives, Marine and Stationary Engine Cylinders, and the Seibert and Gates Patents, with Sight Feed.

Take Notice.

The "Sight Feed" is owned exclusively by this company. See Judge Lowell's decision in the United States Circuit Court, District of Massachusetts, Feb. 23d, 1882. All parties are hereby notified to desist the use, manufacture or sale of INFRINGING CUPS, as we shall vigorously pursue and prosecute all infringers.

THE SEIBERT CYLINDER OIL-CUP CO.
53 Oliver St., Boston, Mass.



THE BRADSTREET Mercantile Agency

HAS NOW BEEN

Under its present successful management for the past seven years,

And during that time its business has more than trebled, while its facilities have proportionately increased.

No expense is considered too great in obtaining and applying to the conduct of the business all possible improvements. With its present system for obtaining and promulgating information, this Agency is justly regarded by its patrons as authority on all matters affecting commercial credit. Its ramifications are greater and its business larger than any similar organization in the world conducted in one interest and under one management.

You are respectfully invited to investigate, and if in need of an Agency, to test its ability to serve you.

CHAS. F. CLARK, President.

Baltimore Office,—American Building,

H. KERSHAW, Supt.



TOOLS for Machinists, Amateurs, Jewellers, Model Makers, Blacksmiths, Carpenters, Cone-makers, etc.
Send 20 cts. for new Metal Worker's Catalogue, 500 Pages.
Wood Worker's Catalogue free.
FALLMAN & McFADDEN, Philadelphia, Pa.

ESTABLISHED

POOLE & HUNT,

—1851—

Founders and Machinists.

POOLE & HUNT'S

LEFFEL TURBINE WATER WHEEL,

Prices as Low as any

other First-Class Wheel.

Machine Moulded

MILL GEARING.

Our plant for the production of MACHINE-MOULDED MILL GEARING is unequalled in the country, and we are prepared to fill orders with dispatch and at GREAT SAVING IN COST OF PATTERNS.



Shafting, Pulleys, HANGERS, PEDESTALS.

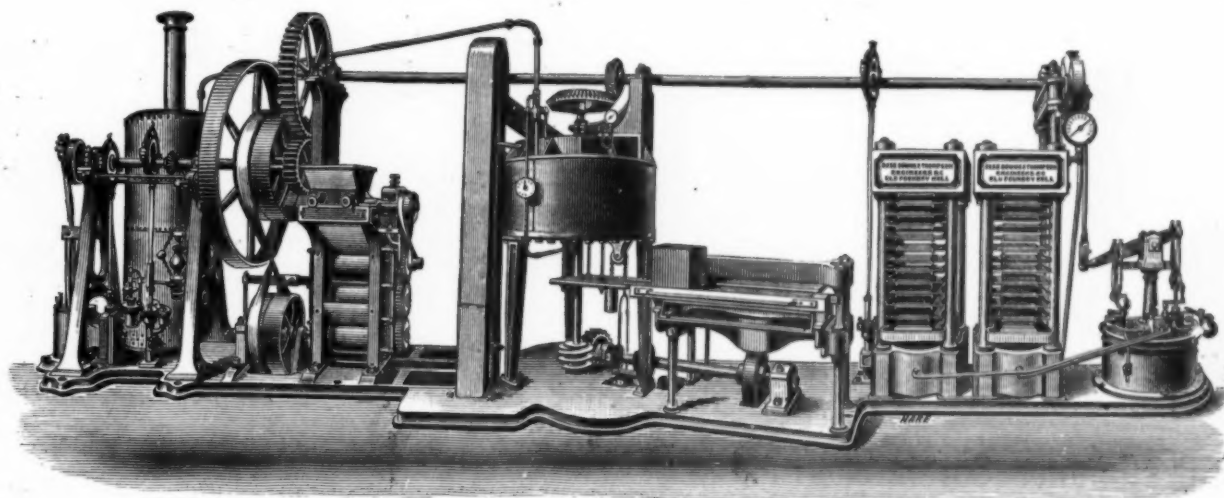
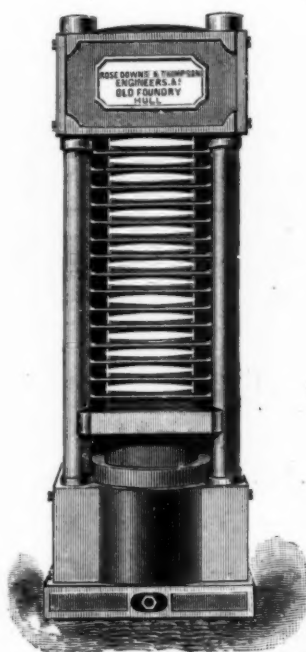
SHAFTING, PULLEYS, HANGERS and COUPLINGS, of latest and most approved designs.

N. B.—Shipping facilities the best in all directions.

Send for Pamphlet. Send for Price-List.

List of our Gear-
ing Mailed on
Application.

POOLE & HUNT, BALTIMORE, MD.



REVOLUTION IN

Cotton-Seed Crushing.

UNQUALIFIED SUCCESS OF

ROSE, DOWNS & THOMPSON,
HULL, ENGLAND.

Anglo-American System of Extracting Oil from Cotton Seed,

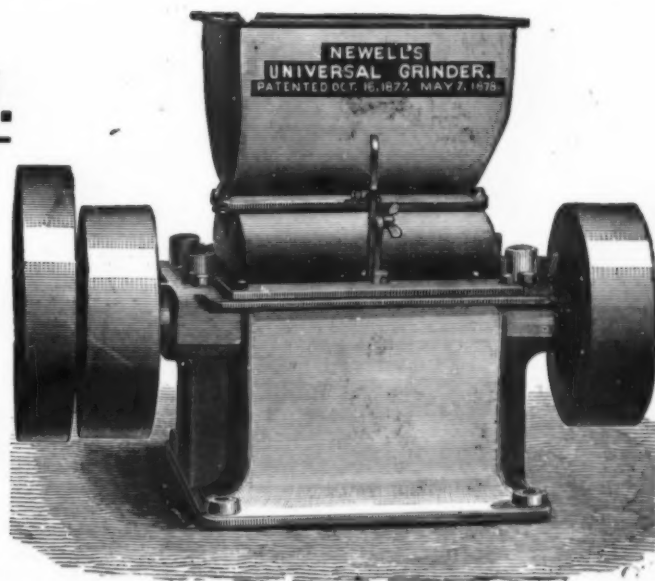
SOLE AGENTS FOR THE UNITED STATES AND CANADA,

The Newell Universal Mill Co.

10 BARCLAY STREET, NEW YORK,

Who also manufacture the NEWELL MILL in all its forms and sizes.

A large stock assorted sizes of Engines and Boilers constantly on hand for immediate delivery.



If you contemplate the erection, extension, or alteration of any Mill, Factory, or Mechanical Works of any sort, requiring *Steam, Water, or Gas* to be introduced, it will well repay you to send for our Catalogue and Price-List. It contains upwards of 600 Cuts, and will be found of service to **Pipe-Fitters, Engineers, Superintendents of Railroads, Mills, Factories, Water, Ice, Oil and Gas Companies**, and all who are interested in the use of *Steam, Water, and Gas*, and is an exhaustive book of reference for the selection of such goods.

PANCOAST & MAULE, 243 and 245 South Third Street, Philadelphia.

Steam

Wrought-Iron Pipes, Cast-Iron Pipes, Boiler Tubes, Spiral Riveted Wrought-Iron Pipes, Cast-Iron Fittings, Wrought-Iron Fittings, Malleable Iron Fittings, Bent Coils of Wrought Iron Pipe for Heating, Boiling, &c., Steam Radiators, Brass and Iron Cocks and Valves, Radiator Valves, Openway Valves, Boiler Trimmings, Gauge-Cocks, Steam Gauges, Water Gauges, Steam Whistles, Lubricators, Oil and Tallow Cups, Revolution Counters, Gongs, Steam Boiler Tube Cleaners, Steam Boiling Kettles, Feed-Water Heaters, Pressure Regulators, Damper Regulators, Steam Traps, Glue Heaters, Injectors, Inspirators, Steam Pumps, Syphon Pumps, Engine Governors, &c.

Contractors for
Steam-Heating Apparatus
of all kinds.

Water

Wrought-Iron Pipes—Plain and Galvanized, Heavy Cast-Iron Pipes, Fittings of all kinds, Cast-Iron Soil Pipe, Green-House Boilers, Pipe and Fittings, Pumps of every description—Steam- or Hand-Power, Fire Hydrants and Valves, Street Main Valves, Foot Valves, Hose Valves, Pipes, Couplings, &c. Bath Boilers, Brass Water-Cocks and Valves in Detail.

Gas

Wrought- and Cast-Iron Pipes, Cast, Wrought, and Malleable Iron Fittings, Brass Fittings, Service and Meter Cocks, Gas Burners, Solder Furnaces, Gas Valves, Street Lamp-Posts and Lanterns, Gas-Fitters' Tools and Sundries.

Tools

Hand and Power Pipe-Cutting and Threading Machines, Pipe Stocks and Dies, Pipe Taps, Drills and Reamers, Machinists' Die-Plates, Machinists' Taps, Solid Bolt Dies, Pipe-Tongs, Adjustable Tongs, Pipe-Wrenches, Monkey-Wrenches, Gas-Fitters' Pliers, Augers, Pipe-Cutters, Pipe Vises, Chisels, Ratchets, Gas-Fitters' Pumps, Boiler Tube Brushes and Cleaners, Boiler Tube Expanders, Hydraulic Punches and Jacks, Patent Hand Hoisting-Machines, Oilers, Hammers, &c.

Correspondence solicited from parties requiring any Goods in the above lines.

MENTION THIS PAPER WHEN YOU ADDRESS US.

McShane & Bell Foundry

Fine Iron and Brass Castings Made to Order.



Manufacture those celebrated **Bells for Tower Clocks, Court-Houses, Cotton Mills, Factories, &c.** Prices and catalogues sent free. Address **H. McSHANE & CO., Baltimore, Md.**

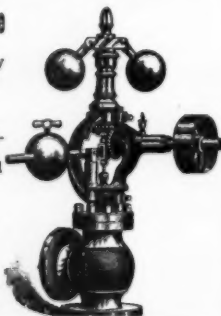
The Gardner Governor.

Over 30,000 in Use

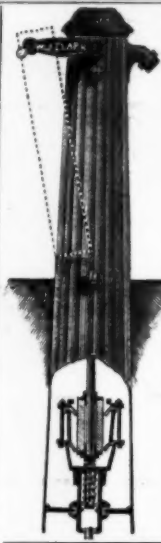
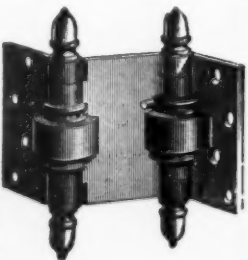
Adapted to every style of stationary and portable steam engines.

Warranted to give satisfaction, or no sale.
For Circulars and Prices address

The Gardner
Governor Co.
QUINCY, ILL.



UNION SPRING HINGES
are Simple, Easily Set.
Cannot be put on wrong. They work either way, right or left. All sizes. Single and Double. Have no screws and Light Booms they have no end, and Price List. M. W. ROBINSON, Sole Agent, 79 Chambers St., New York.



W. J. CLARK & BRO.

Manufacturers of

Hydrants.

These Hydrants are made of the best material, and are guaranteed to be entirely non-wasting and non-freezing. The works of these Hydrants can be taken out and repaired without breaking the ground. Send for circular.

38 N. Holliday Street,
BALTIMORE, MD.

1837. NOVELTY WORKS. 1893.

JAMES MURRAY & SON, Machinists and Millwrights

Engines and Boilers, Mills of all kinds, Marine Railways, &c. Improved Clay Tempering Machinery, Steam or Horse Power. Phosphate Machinery, Crushers, Rollers, Mixers, &c., &c.

40, 42 & 44 York Street,
NEAR LIGHT, BALTIMORE.

Repairing of all kinds promptly done.

Established 1793.



H. BALDERSTON & SON,
MANUFACTURERS OF

WIRE GRATING FOR WINDOWS

Doors and Office Railing, Wire Screens for Banks, Churches and Store-Fronts. Woven Wire, Wire Tree-Guards, Sieves, Screens for Coal, Sand, &c.

66 S. Calvert Street, Baltimore.

WIRE RAILING

and Ornamental Wire Works.

DUPUR & CO. 36 N. Howard St., Baltimore.

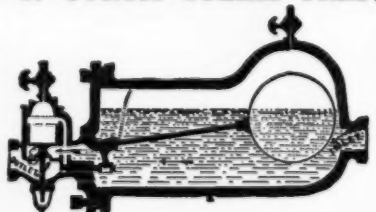
Wire Railing for Cemeteries, Lawns, Gardens, Offices and Balconies; Window Guards, Tree Guards, Wire Cloth, Sieves, Fenders, Cages, Sand and Coal Screens, Iron Redsteads, Chairs, &c.



Trade: Send for cuts: Grats.
Send for circulars: Grats.
Send 10 cents for Book of Rules.

THE LICOWSKY
Clay Pigeon Co.
Box 1,292,
Cincinnati, Ohio.

The CURTIS STEAM TRAP.



Has main valve outside. Air valve inside.
MANUFACTURED BY
Curtis Regulator Co., 158 Beverly St., Boston.

GENERAL AGENCIES:
109 Liberty St., New York; No. 19 N. 7th St., Philadelphia; 86 and 88 Market St., Chicago; No. 49 Holliday St., Baltimore; No. 707 Market St., St. Louis; No. 745 Craig, Montreal.

NELSON CURTIS, Agent.



STEPHENS' VISES.

FLAT and SWIVEL BASES; SOLID JAWS STEEL FACED and SOLID STEEL BARS; ADJUSTABLE ATTACHMENTS.
For Jewelers, Machinists, Car and Locomotive Works and all other Vise Work they maintain their superiority in strength, firmness of grip, durability and make; while affording the greatest economy in time and labor. Special Vises for Amateurs and Wood-Workers. Sold by the Trade. Send for Circular.

MELVIN STEPHENS, Proprietor,
Office, 41 Dey St., NEW YORK.

TOOLS. IMPROVED POWER OR HAND PLANER.

Planes 27 in. long, 12 in. wide, 8 in. high.

MACHINISTS, ENGINEERS, MODEL MAKERS

and all classes of Mechanics can find TOOLS to suit them at

134 to 188 Washington St.

BOSTON, MASS.

A. J. WILKINSON & CO. Catalogues free.



THE BLESSING PATENT RENEWABLE SEAT.

Phosphor Bronze Stop and Check Valves.

The Renewable SEATS and DISCS are cast from the best PHOSPHOR BRONZE METAL, which has lasting qualities, double that of the best Steam Metal commonly used in first class valves.

The Seats do not have to be screw'd in and out, but are simply dropped into their places, and are held in position by the bottom of the cage, which is cast on cap.

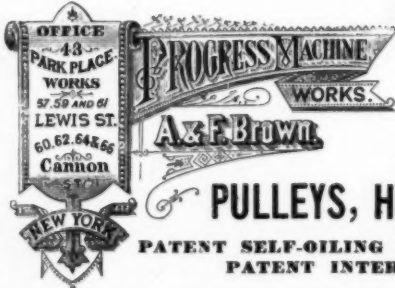
ALSO, RETURN STEAM TRAPS.

MANUFACTURED BY

The Albany Steam Trap Co.,

Office and Works,
78 and 80 CHURCH STREET,

ALBANY, N. Y.



PATENT STEEL SHAFTING

Of Superior Quality.

PULLEYS, HANGERS, COUPLINGS, &c.

PATENT SELF-OILING HANGERS,

PATENT INTERNAL CLAMP COUPLINGS,

PATENT FRICTION CLUTCHES.

A. & F. BROWN, 43 Park Place, N. Y.

STUEBNER & WOODS

168 & 170 E. Third St., Hunter's Point
LONG ISLAND CITY, N. Y.

MANUFACTURERS OF

COAL DEALERS AND STEVEDORES' SUPPLIES.

STEEL and IRON COAL TUBS,

Side and Bottom Dumping Cars, Coal and Coke Barrows,

HOISTING BLOCKS, ETC.

Send for Circulars, &c.

PATENT CLASP PULLEY

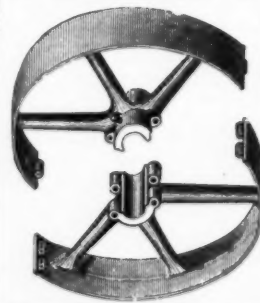
Made in Halves. Same Price as Whole Pulleys.

Shafting, Hangers.

Castings of Every Description Made. Stationary, Distillery, Mill and Boiler Work.

JNO. N. MARQUETTE,

No. 6 W. Falls Avenue, Baltimore, Md.



GOVERNORS { For Water } Cohoes Iron Foundry & Mch. Co.
Wheels { Send for Catalogue, Cohoes, N. Y.



PATENT Wood-Working Machinery

Of the Latest and most Improved Designs for
Planing Mills, Furniture Factories, Chair
Factories, Car and Agricultural Works,
Carriage and Buggy Shops and
GENERAL WOOD WORKERS,

MANUFACTURED BY
THE EGAN CO.

(Successors to the Cordesman & Egan Co.)
228 to 240 W. Front St. Cincinnati O., U. S. A.
Thos. P. Egan, Pres. Ed. Ruthven, Sec. F. Danner, Sup.

John G. Mengel & Co.

— LEADING —

Type-Founders and Electrotypers

Modern Book, Newspaper, and Job Type cast in a superior
Copper-Mixed Metal, and on the new

JUSTIFIABLE SYSTEM OF BODIES.

LARGEST PRINTERS' SUPPLY HOUSE in the SOUTH

Dealers in and Agents for all the leading Cylinder
and Job Presses, Paper-Cutters, &c., &c.

Agents for the Celebrated German Printing Inks.

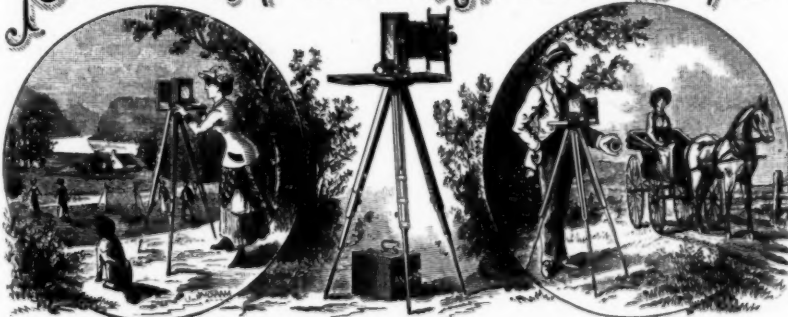
SECOND-HAND MACHINERY Bought, Sold, and Exchanged.

Complete Newspaper and Job Offices Furnished at the Lowest
Prices and on good terms.

Send for Specimen Sheets, Estimates, &c., to

31 German Street, Baltimore.

PHOTOGRAPHY MADE EASY



AMATEUR EQUIPMENTS IN GREAT VARIETY, FROM \$10 UPWARD

Sole Proprietors of the Celebrated Novel Cameras.

E. & H. T. Anthony & Co.

Send for Illustrated Catalogue.

Forty years established in this line of business. **591 Broadway, New York.**

JOHN R. EDWARDS, Blank Book Manufacturer,

LITHOGRAPHER, PRINTER AND STATIONER,

167, 169 AND 171 W. LOMBARD ST. COR. SHARP ST.

— BALTIMORE, MD. —

Specialty: Account Books to order for Manufacturing Establishments, Banks
and Insurance Companies. Estimates Furnished.

PORTABLE FORGES

Empire Portable Forge Co.
Cohoes, N. Y.

Send for Catalogue.

GRAND HOTEL



BROADWAY and 31st St., NEW YORK.

EUROPEAN PLAN.

HENRY MILFORD SMITH & SON, Proprietors.

ADAMS HOUSE,



BOSTON.

BAY STATE HOUSE,

WORCESTER, MASS.

W. L. SHEPARD, Proprietor.

This House has been thoroughly repaired and renovated, and will be KEPT STRICTLY FIRST
CLASS IN EVERY RESPECT.

The Only First-Class Hotel in the City.

Rates, \$3.00 and \$3.50 per day

The True Idea of Assurance.

Women's Mutual Insurance and ACCIDENT COMPANY.

PRESIDENT,

ELIZABETH B. PHELPS.

FANNY M. GERARD, Treas.

ELIZABETH S. ROBERTS, Secy.

MEDICAL EXAMINERS.

VICE-PRESIDENT,

MARGARET HOLCOMBE.

CORNELIA KAMPING, Actuary.

ALFRED K. HILLS, M. D., 465 Fifth Avenue.

MARY PUTNAM JACOBI, M. D., 119 W. 34th Street.

JOHN A. KAMPING, Attorney and Counsel, 126 Broadway, New York.

The Company is incorporated under the Laws of New York, approved by the Supreme Court and Superintendent
of the Insurance Department, and subject to the latter's supervision.

ITS OBJECT
is surely and cheaply to provide an indemnity for loss by
death and accidental disablement.

ITS PLAN
consists in assessing the members ratably according to age
in the Life Class, and according to occupation or degree of
risk in the Accident Class whenever a loss in either class
occurs. In other words, the actual losses only are paid by
the policy holders, which thus secures insurance at cost.

ITS MEMBERSHIP
comprises persons between the ages of 16 and 65, of ap-
proved physical condition. The Life Class is separate and
distinct from the Accident Class, members being liable for
losses only occurring in the class to which they belong.
This company, having been organized for the purpose of
removing the prejudices which created discrimination in
Life insurance against women, has adopted the broad prin-
ciple of no discrimination in membership on account of sex.
This Company requires Agents in every city, town and village, to whom liberal terms will be given. Address as above.

ITS SAFETY AND SECURITY
consists in its economical system, its certainty of solvency,
(for it incurs no risk but what the members may discharge
by one assessment, and its SECURITY RESERVE FUND, which
in time, it is calculated, will make a member's member-
ship self-sustaining.

ITS RATES OF ASSESSMENT
are safer than those adopted by others, and are no more
expensive.

FINALLY,
This company confines itself to the legitimate business for
which insurance has been accorded protective and encour-
aging legislation; it proposes to adhere strictly to business
principles in its management, and to establish the fullest
protection to its members in a manner the simplest, cheap-
est and most complete of any organization of equal safety.
Membership may be acquired by letter. Apply to

ELIZABETH S. ROBERTS, Secretary.

283 Fourth Avenue, New York.

To whom liberal terms will be given. Address as above.

STEAM

PUMPS

SEND FOR PRICES.

VALLEY MACHINE CO. EASTHAMPTON, MASS.

WESTINGHOUSE, CHURCH, KERR & CO.

Contracting and Consulting Mechanical Engineers.

Design and furnish Everything Pertaining to the

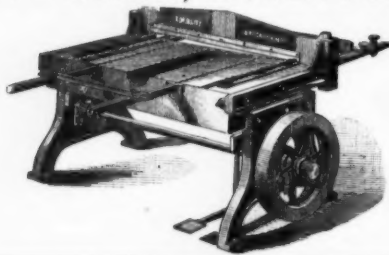
Generation, Transmission and Application of Power.

17 CORTLANDT ST., NEW YORK.

E. W. BLISS,

MANUFACTURER OF

CUTTING, DRAWING, STAMPING, EMBOSSING, AND POWER-PUNCHING PRESSES



DIES for Cutting, Drawing, Stamping, Reducing, Embossing and Punching all shapes and classes of Sheet Metal.

Hand and Power Circular Shears.

Foot and Power Squaring Shears.

Office and Salesroom, 17 Adams Street,
BROOKLYN, N. Y.

WORK-SHOPS

Without Steam Power

SHOULD USE

BARNES'

Patent Foot Power Machinery. COMPLETE

Outfits for actual workshop business.

With them Builders, Cabinet

Makers, Metal and Wood Work-

ers compete with steam power.

Machines on trial if desired.

Proof of value, prices, full

detail, illustrated catalogue, free.

W. F. & John Barnes Co.

Rockford, Ill.

Address No. 221 Ruby St.

Dealers, send for Discounts.



Barnes' Pat. Upright Drills.
20-inch Swing, with both
Worm and Lever Feed.



Barnes' Patent Engine Lathe
15-inch swing, 6-foot or 8-foot
Bed. These machines are made a
specialty in our factory, they have
advantages not found in other
machines in this line. It will pay
parties desiring to purchase, or
know more about this class of ma-
chines, to send for full description
and prices.

W. F. & JOHN BARNES,
221 Ruby St., Rockford, Ill.

STEEL CASTINGS

FROM 1-4 to 15,000 lbs. WEIGHT.

True to pattern, sound, solid, free from blow-holes, and
of unequal strength.

Stronger and more durable than iron forgings in any
position or for any service whatever.

20,000 CHANK SHAFTS and 15,000 GEAR WHEELS of
this steel now running prove this.

CHANK SHAFTS and GEARING specialties.

STEEL CASTINGS of every description.

Send for Circulars and Prices to

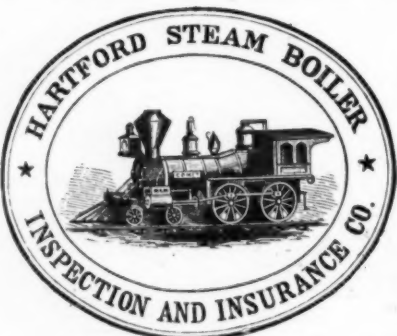
CHESTER STEEL CASTINGS CO.

Office, 407 Library Street, Philadelphia.

Works, Chester, Pa.

—ISSUES—
POLICIES OF INSURANCE

AFTER



A CAREFUL INSPECTION
OF THE
BOILERS,

Covering all
Loss or
Damage to

Boilers, Buildings & Machinery

ARISING FROM STEAM BOILER EXPLOSIONS.

The Business of the Company Includes All Kinds of Steam Boilers.

Full information concerning the plan of the Company's operations can be obtained at the
COMPANY'S OFFICE, Hartford, Conn., or at any agency.

M. ALLEN, Pres.

W. B. FRANKLIN, Vice-Prest.

J. B. PIERCE, Secty.

—BOARD OF DIRECTORS—

J. M. ALLEN, President.
LUCIUS J. HENDEE, President Aetna Fire Insurance Co.
F. W. CHENEY, Asst. Treas. Cheney Bros. Silk Mfg. Co.
CHARLES M. BEACH, of Beach & Co.
DANIEL PHILLIPS, of Adams Express Co.
G. M. BARTHOLOMEW, Pres't American National Bank.
R. W. H. JARVIS, Pres't Colt's Fire Arms Mfg. Co.
THOMAS O. ENDERS, Secretary Aetna Life Insurance Co.
LEVERETT BRAINARD, of Case, Lockwood & Brainard.

GEN. WM. B. FRANKLIN, Vice-President Colt's Patent
Fire Arms Manufacturing Co.
GEO. CROMPTON, Crompton Loom Works, Worcester.
WILLIAM ADAMSON, of Baecker, Adamson & Co., Phila.
HON. THOMAS TALBOT, Ex-Governor of Massachusetts.
NEWTON CASE, of Case, Lockwood & Brainard, Hartford.
NELSON HOLLISTER, of State Bank, Hartford.
CHAS. T. PARRY, of Baldwin Locomotive Works, Phila.
HON. H. C. ROBINSON, Attorney-at-Law, Hartford.

LAWFORD & McKIM, Agents for Maryland, 10 S. Holliday St., Baltimore, Md.

1500
ENGINES
NOW
IN
USE!



Our capacity being now equal to 100 Engines
per month, we shall hereafter keep in stock for
immediate shipment all sizes from 4 to 200 H. P.

SEND FOR ILLUSTRATED CIRCULAR and REFERENCE LIST.

THE Westinghouse Machine Co., Pittsburgh, Pa.

SALES DEPARTMENT CONDUCTED BY

Westinghouse, Church, Kerr & Co. 17 Cortlandt Street, New York.
Fairbanks, Morse & Co. Chicago, Cincinnati, Cleveland, Louisville & St. Paul.
Fairbanks & Co. St. Louis, Indianapolis and Denver.
Parke & Lacy San Francisco and Portland, Oregon.
Parke, Lacy & Co. Salt Lake City, Utah, and Butte, Montana.
D. A. Tempkins & Co. Charlotte, N. C.
Keating Implement & Machine Co. Dallas, Texas.
Robert Middleton Mobile, Ala.
H. Dudley Coleman 9 Perdido Street, New Orleans, La.
Imray & Co., Sidney and Melbourne, Australia.
R. Rogers 43 Rue Lafitte, Paris.

THE BERRYMAN

Patent Feed Water Heater and Purifier

The Shells of the Berryman are of C 11
No. 1 iron, and tested to 175 pounds cold
water. Every heater is guaranteed to be
absolutely tight, making it the only Feed
Water Heater applicable to a Condensing
Engine, increasing the vacuum and imparting
a high degree of heat in the feed water, sav-
ing eight to ten per cent.

THE BERRYMAN

has been in constant use for more than 12
years in all parts of the United States and
Europe, and none have ever needed repairs.
It gives the highest result attainable by the
use of exhaust steam.

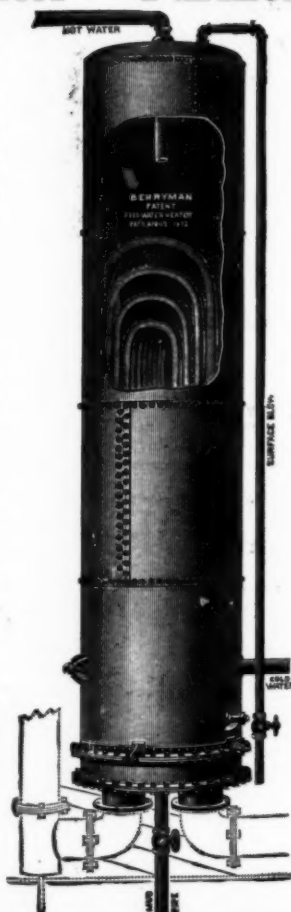
Boiler repairs, and the vexation by
shutting down when in a hurry, are saved.
The trouble and expense of throwing out a
poor heater and putting in a good one are
saved by the use of THE BERRYMAN
FEED WATER HEATER AND PURIFIER.

All Oil or Fatty Matter is excluded
from the boilers, as the feed water and exhaust
steam do not come in contact by the use of
THE BERRYMAN FEED WATER
HEATER AND PURIFIER.

I. B. DAVIS & SON,

Sole Proprietors & Manufacturers in the U. S. Office & Works, HARTFORD, CONN.

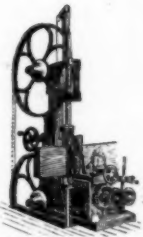
Philadelphia Office, 125 North 4th St., JAS. BERRYMAN, Manager.



P. PRYIBIL, 461 to 467 W. 40th Street,
NEW YORK.

MANUFACTURER OF SUPERIOR

WOOD-WORKING Machinery.



SHAFTING, PULLEYS, HANGERS, &c.

Send postal card for
72-page catalogue.

PHOSPHOR-BRONZE



The celebrated alloys in Wire, Rods, Sheets, Bolts,
Wire Ropes, Wire Cloth, Castings, Ingots, etc.
Pamphlets and particulars on application to

THE PHOSPHOR-BRONZE SMELTING CO., Limited.

No. 512 ARCH STREET, PHILADELPHIA, PA.

Owners of the U. S. Phosphor-Bronze Patents.
Sole Manufacturers of Phosphor-Bronze in the United States.



TRADE MARK.



COVERT'S PATENT HARNESS SNAPS, CHAIN & ROPE GOODS,

ADJUSTABLE SOLDERING IRONS, &c.

These Goods are sold by all Leading Jobbers in General and Saddlery Hardware, at manufacturers' prices. Send for illustrated catalogue and price list.

COVERT MFG CO., West Troy, N. Y.

Union File Co.

311 to 315 North St., Baltimore, Md.

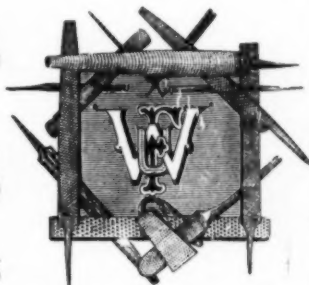
MANUFACTURERS OF

FILES & RASPS

Made from the Best Refined Cast Steel.

With the requisite facilities to produce a first-class article, we are enabled to offer Files that will give entire satisfaction.

MORITZ & KEIDEL, Agents, 48 & 50 German Street, Baltimore, Md.



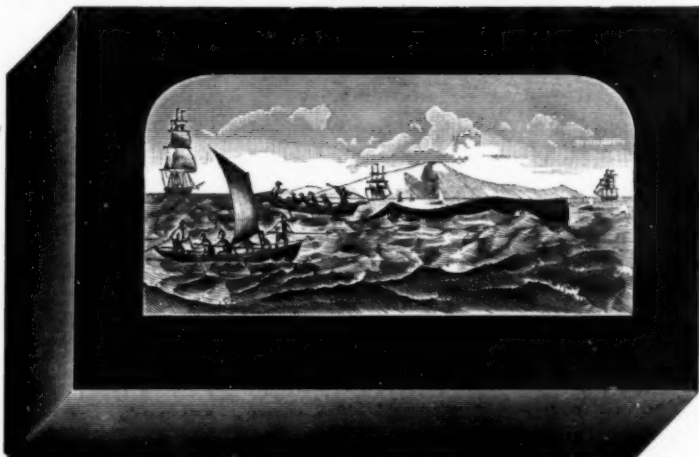
The Oldest Oil House in the City. Business Established 1832 (on Present Premises.)

WM. C. ROBINSON & SON,

81 SOUTH ST., BALTIMORE, MD.

Manufacturers and
Wholesale Dealers in

OILS!



Specialties—Oils for Cotton and Woolen Mills, Railroads, Tanners' and Machinery Use.

Our Colophine Cylinder Oil is the best in use, 650° fire test, 28° gravity. Perfect Engine Oil 600° fire test, 20° gravity. Colophine Engine Oil 550° fire test, 23° gravity. Agent for Downer's Spindle, Champion and Mineral Sperm, Meriam & Morgan's Paraffine Co's Paraffine, William's Odorless Lubriphene Oils. Also Manufacturers' Agent for 25°, 28° and 30° Paraffine, and 31° Neutral Bloomless Oils. Correspondence solicited.

ROADS, MINES and FARMS.

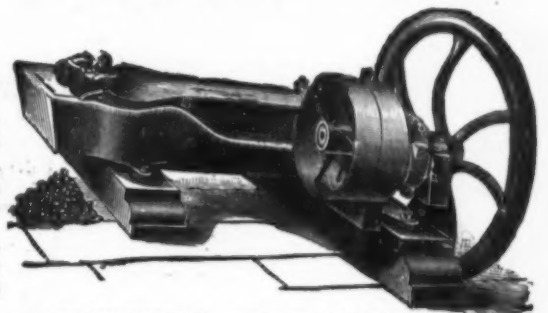
FORSTER'S

Rock Breaker.

Owing to its peculiar SIDE MOVEMENT does not "Shatter" the stones as all other crushers do, but makes ballast and macadam equal to HAND HAMMERED.

Very simple and inexpensive to operate. The only Crusher that can be operated with ordinary Horse Power.

Planters will please notice that SMALL MACHINES can be operated by HAND. By changing Dies the machine will crush and pulverize Phosphate Rock for Fertilizing, in one operation.



ADDRESS

TOTTEN & CO., Rolling Mill and Machinery Founders,
PITTSBURGH, PA.



ANTI-FRICTION

Roller Detachable Chain Belting.

Especially adapted for the rapid and economical handling of CLAY, TILE, LIME, PLASTER, CEMENTS, BROKEN STONE, COAL, ORES, SAND, DRY and WET TAN, SAW DUST, SLABS, PULP, GRAIN, FLOUR, ICE, &c., &c., &c. For ELEVATORS, CARRIERS, CONVEYERS, &c., &c. Propelling STEAM BOATS and for other DRIVING PURPOSES.

MANUFACTURED AND SOLD BY THE

Roller Chain Belting Co.

COLUMBUS, OHIO.

Send for Illustrated Catalogue.

Established a Quarter of a Century in the Manufacture of the Celebrated MILLER SAFES.

L. H. MILLER,

SAFE AND IRON WORKS,

BALTIMORE, MD

Sole Manufacturer of

Miller's Patent Fire & Burglar Proof Safes,

BANK VAULTS, DOORS AND LOCKS.

PRINCIPAL OFFICE, 252 W. BALTIMORE ST.

[NEAR HANOVER.]

Factory—Square bounded by Warner, Claret, Henrietta and Fremont Sts., South Baltimore.



CAREW'S * PATENT * WIRE * CUTTER.



These goods have recently been greatly improved. They are now made throughout of

FORGED STEEL!

The advantage of this cutter is seen at a glance. The adjustable jaws are its main feature. These are made of the best tool steel, and are brought to a keen cutting edge before being tempered. The cutting quality is unsurpassed. Whenever they become dulled by use, they can easily be removed, by driving from the end showing price-mark, ground, and as easily replaced. This may be repeated as often as expedient; or they can be replaced by duplicate jaws, thus obviating the necessity of purchasing new cutters. Five sizes 6, 8, 10, 12 and 14 inch.

M. W. ROBINSON. Sole Agent, 79 Chambers St., N. Y.

S. W. RITTER, Millwright,

—BUILDER OF—

Flour and Saw Mills, Drug and Chemical Works, Portable Mills, Smut Machines, Mill Stones. Bolting Cloths, Brushes, Guano Fertilizer

Mills, and General Mill Supplies,

261 S. Caroline Street, BALTIMORE, MD.

HENLEY'S CHALLENGE ROLLER SKATE.

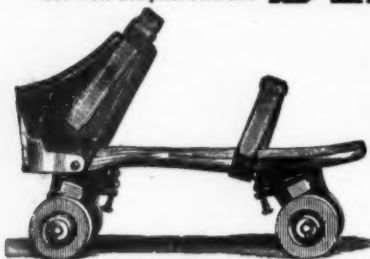
THE LATEST AND BEST
And Most Complete Scientific

SKATES IN THE MARKET.

HENLEY'S IMPROVED CHALLENGE
RINK AND CLUB SKATES.
LIBERAL TERMS TO THE TRADE.

For prices, circulars and further particulars, address
M. C. HENLEY, Patentee and Manufacturer,
RICHMOND, IND.

Send four-cent stamp for new forty-page Illustrated Catalogue.
MENTION MANUFACTURERS' RECORD.



THE RICHMOND GLOBE ROLLER SKATE,

The Easiest Running, Most Durable, and Most Practical Skate in the Market.



Rink men and jobbers will find the
"GLOBE RINK" skate to be superior
to all others, because:

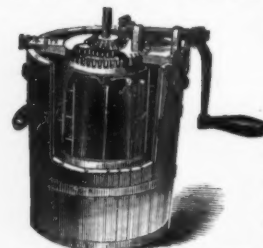
It has no springs, rivets or pins to break,
get loose or wear out. It will not crush the
rubber cushion, as their new connecting
plate prevents crushing. The wearing of
the bearings being automatic, the truck
frame will not become loose or rickety
from long usage. The tension is easily
regulated by means of the draw-bolt, to
suit the requirements of any skater. The
truck frame can be instantly detached
without removing the draw-bolt. It is
light, strong, durable, and skaters pro-
nounce it the best skate made.

We especially call the attention of the
skaters of America to our New Half-
Clamp Corrugated Steel Bottom
Skates, in which we pride ourselves in
having the Lightest, Strongest and
Handsome Skate in the World.

For prices and catalogues address
MITCHELL & VANNEMAN,
RICHMOND, IND.

Gooch Peerless and Giant Freezers.

Increase of Sales Nine
Hundred Per Cent.
since 1879.



These Freezers have grown
into such popularity that they
are universally acknowledged
by the trade to be without an
equal, and are kept in stock
by most of the leading dealers
in every State of the
Union.

We scarcely ever lose a customer who tries our goods, and
all we ask is an order for a sample, and we will send you the
best and handsomest Freezer you ever saw.

SEND FOR SAMPLE.

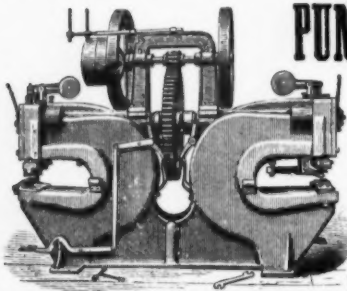
MANUFACTURED BY

THE GOOCH FREEZER COMPANY,
CINCINNATI.



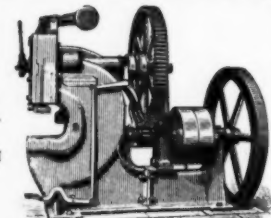
THE LONG & ALLSTATTER CO., Hamilton, Ohio.

PUNCHES, SHEARS & HAMMERS,



DOUBLE.
SINGLE.
HORIZONTAL.
TWIN BOILER.
SPACING GATE.
MULTIPLE ANGLE.
BAR, &C.
BELT AND STEAM
DRIVEN.

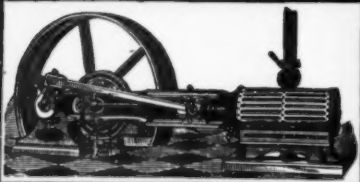
Send for Catalogue.



THE CUMMER ENGINE CO.

CLEVELAND OHIO

SEND FOR 150 PAGE ILLUSTRATED CATALOGUE.



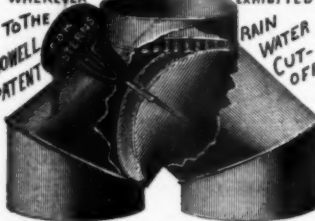
Awarded highest premiums at
Cincinnati and Louisville Ex-
positions of 1883, for "Best Auto-
matic Engine." We will furnish
anyone copies of the ORIGINAL
ENTRIES of several engine build-
ers who claim they were not
competing with us. They all en-
tered in the same class with us,
and now by deceptive Circulars
(one headed "Fact versus False-
hood.") attempt to mislead.
No premiums were offered
for Condensing Engines.

AUTOMATIC

W. J. CHAPMAN, Direct Shipper Special attention given to orders from found-
ries and machinists.
Office, York and Connellsville Coke. William St. J

HOWELL'S Patent RAIN WATER CUT-OFF

HIGHEST PREMIUM AWARDED
WHEREVER EXHIBITED



RECOMMENDED BY ARCHITECTS, BUILDERS
USERS, EVERYWHERE.

For turning water into or off from the cistern. The
handle, which is an iron weight, insures the bucket remain-
ing where placed and entirely prevents its being turned by
the downflow of water. The bucket or valve passes behind
the rim at the top and overlaps at the bottom, thus securing
perfect water joints at both connections. We manufacture
all sizes from 2 1/4 to 24 inches; 2 1/4 inch, \$5; 3 inch, \$6; 3 1/2
inch, \$8; 4 inch, \$9; 5 inch, \$14; 6 inch, made of 1/2 Tin,
\$20. These sizes are always in stock.

Packed in crates of one dozen each size up to 5 inch; 5
and 6 inch in crates of 1/2 dozen each; f. o. b.; no charge
for crates. For sale by dealers all over the United States.

G. W. HOWELL, Manufacturer, COVINGTON, KY.

Standard Smelting and Refining Works, METALS,



BABBIT METALS.

TINNERS' SOLDER.

PLUMBERS' SOLDER.

COPPERSMITHS' SOLDER.

ELECTROTYPE METAL.

STEREOTYPE METAL.

INGOT BRASS.

162, 164, and 166 Water Street,

CINCINNATI, O.

INGOT COPPER.

PIG TIN.

ANTIMONY.

PIG LEAD.

SPELTER.

BAR LEAD.

BAR TIN.

Genuine Babbit Electrotyping and Stereotype Metals a Specialty. Daily
quotations furnished upon application. Prices lower than any Eastern or Western market.

A First-Class Automatic Cut-Off Engine,

EXTREMELY SIMPLE TO HANDLE AND CONTROL.

Can be produced cheaply, and an ordinary Slide Valve Engine can be
converted into the best Automatic Cut-Off Engine at a trifling expense.

A Saving of 33 1/3 Per Cent. in Fuel guaranteed by
adopting the **Topmiller Automatic Valve Gear.**

To manufacturers of Engines we offer State and County rights for sale on
reasonable terms. Send for illustrated circular.

S. OBERMAYER & CO.

Patentees and Proprietors,

Evans Street, South of 8th, Cincinnati, O.

H. J. McKEOWN,

MACHINIST AND MILLWRIGHT.

Shafting, Hangers and Pulleys, Engineers' Supplies, Packing, Sheet Gum, Pipe, Fittings, and Brass
Goods. Special attention given to fitting out shoe and other factories, and to the repair of Gas Engines.
Has now on hand five Wais' Patent Power Combined Splitting and Squaring Shears, which are new, and
may be had on reasonable terms. Also dealer in New and Second Hand Machinery of all kinds. Write for
Catalogues.

196 E. FRONT STREET, CINCINNATI, OHIO.

SCALE IN BOILERS!

The DANGER and REMEDY!

Steam Users should realize the Danger and Extravagant Waste of Fuel
resulting from Scale in Steam Boilers. We offer you a perfect Remedy in our Boiler
Powder, which is absolutely harmless to Boilers or Connections. For particulars address,

OHIO SCALE SOLVENT CO.,

C. W. WITHEBURY, Secretary,
Room 27 Glenn Building.

Cincinnati, Ohio.

C. H. & D. R. R.

Cincinnati, Hamilton and
Dayton Railroad.

From and to CINCINNATI.

TOLEDO, SAGINAW, DETROIT, TORONTO, AND ALL POINTS
NIAGARA FALLS, IN MICHIGAN AND CANADA.

CONNEERSVILLE, RUSHVILLE, INDIANAPOLIS, PEORIA, AND ALL POINTS
BLOOMINGTON, WEST OR NORTHWEST.

RICHMOND, LOGANSPORT, CHICAGO, MONON, AND ALL POINTS
DELPHI, IN THE NORTHWEST.

FORT WAYNE, KALAMAZOO, GRAND RAPIDS, MACKINAW, AND ALL
PETOSKEY, POINTS IN MICHIGAN.

PULLMAN PALACE SLEEPERS AND PARLOR CARS.

For information apply at any Railroad Office in the United States or Canada. In Cincinnati, Ohio, at
Offices: N. W. Corner Fifth and Vine Streets, or Depot, Fifth and Hoody Streets, or address

J. F. MCCARTHY, Agents at
Jno. R. McCord, 5th and Vine Sts.,
Cincinnati, O.

SAM'L STEVENSON,
General Ticket Agent.

KNOWLES STEAM PUMP WORKS,

BUILDERS OF

Single and Duplex Steam and Power Pumping Machinery

44 WASHINGTON ST.

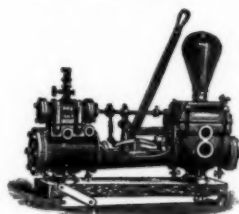
BOSTON.

93 LIBERTY ST.

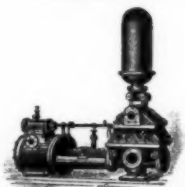
NEW YORK.



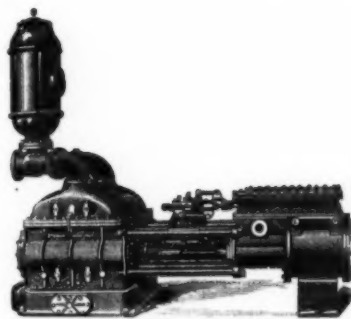
PUMP AND CONDENSER.



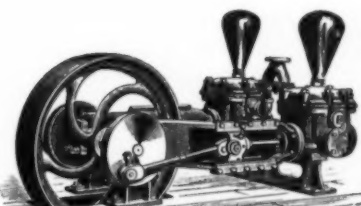
PRESSURE PUMP.



FIRE PUMP.



COMPOUND PUMPING ENGINE.



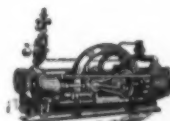
DUPLEX BELT PUMP.



BOILER FEED PUMP.



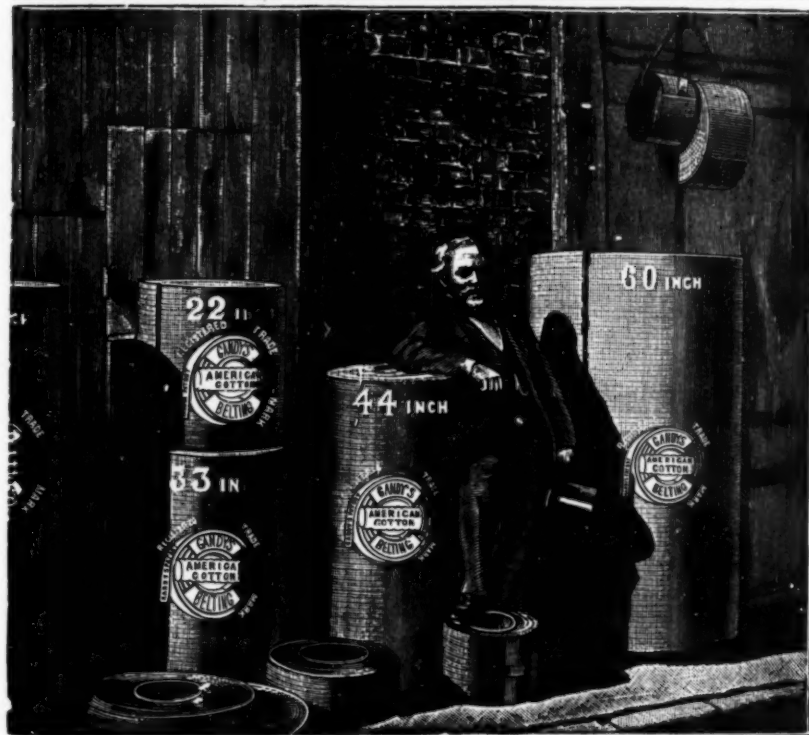
GEARED POWER PUMP.



AIR COMPRESSOR.

SEND FOR
ILLUSTRATED
CATALOGUE,
WITH
Price-Lists.

ESTIMATES
FURNISHED
—ON—
APPLICATION.
CORRESPONDENCE
SOLICITED.



SILVER MEDAL AWARDED AT THE "NATIONAL EXPOSITION OF RAILWAY APPLIANCES," CHICAGO, JUNE, 1883.

GANDY'S PATENT

—+ AWARDED MEDALS AT +—

Berlin.....1879.
Hamburg.....1878.
Sydney.....1879.

New Zealand.....1882.
Cincinnati.....1879.
New York.....1880.

MACHINE BELTING

Made Perfectly Straight and any Length without Joints.

For Main Driving it is the Best.—+—

—+— Much Cheaper than Leather.

—MANUFACTURED BY—

THE GANDY BELTING CO.

BALTIMORE, MD.



New Style Wood-Wheel

POLISHING MACHINE.

UNION STONE COMPANY

WOOD-POLISHING WHEELS A SPECIALTY.

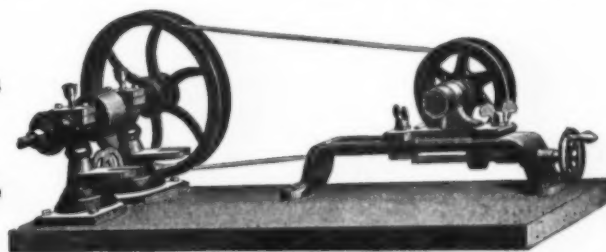
Best Material and Workmanship. Iron Bushings
and Perfectly Balanced.

38 and 40 Hawley St., Boston.

CATALOGUE ON APPLICATION.

Special Contracts for Large Orders.

JACKSON & TYLER, Agents, 16 and 18 S. Howard Street, BALTIMORE, MD.



ENDLESS BELT MACHINE.

GEO. V. CRESSON,

PHILADELPHIA

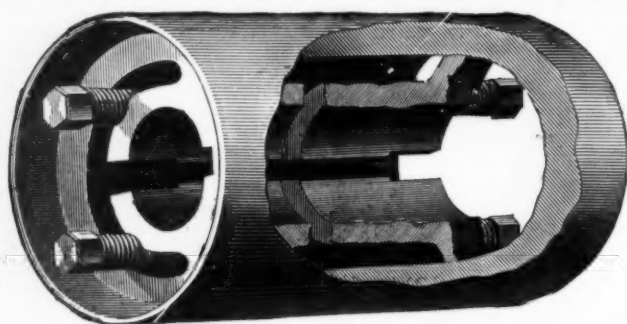
Shafting Works,

18th and Hamilton Streets, Philadelphia, Pa.

—MANUFACTURER OF—

SHAFTING,

And all the Appurtenances used in the
TRANSMISSION OF STEAM POWER.



U. S. CENTENNIAL, 1876,
First Premium.

PARIS EXPOSITION,
1878.

Patent Internal Clamp Coupling for Shafting.

Most easily applied and removed, and has a much stronger grip on Shaft than any other Coupling yet invented.

In use by all First-Class Machinists and Manufacturers.
Many Thousands in Practical Use.

ROBT. WETHERILL & CO.

CHESTER, PA.

ESTABLISHED 1872.

Corliss Engine

—BUILDERS—

Condensing, Non-Condensing,
Compound.
Great Economy, Durability,
Close Regulation.

BOILERS, Shafting and Gearing.

CORLISS PUMPING ENGINES,

—CITY WATER WORKS—



Chapman Valve Mfg. Co.

MANUFACTURERS OF

STEAM, GAS AND WATER

Valves and Gates.

Fire Hydrants

With or Without INDEPENDENT VALVES.

General Office and Works,
INDIAN ORCHARD, MASS.

Treasurer's Office,

Mason Building, 72 Kilby and 112 Milk Sts., Boston.

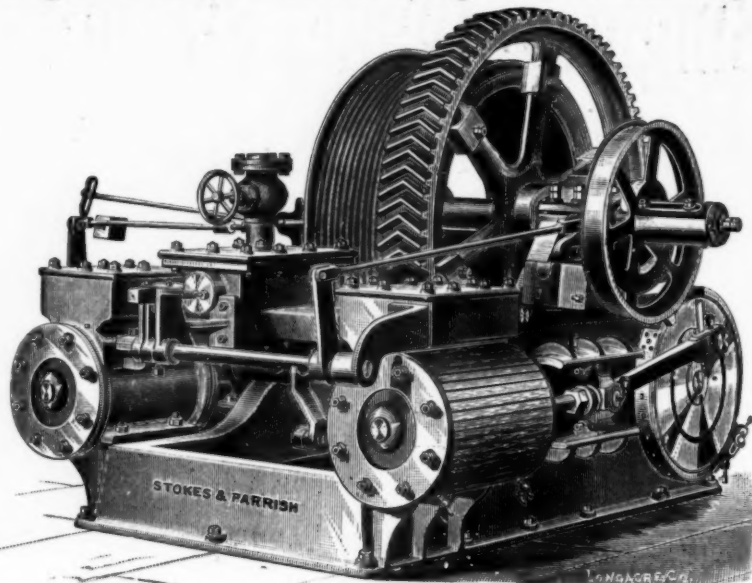
—ALL WORK GUARANTEED.

Send for Descriptive Circulars and Price-List. Correspondence solicited.

STOKES & PARRISH,

PHILADELPHIA.

High-Grade Hoisting Machinery.



BLAST FURNACE HOIST,

With Vertical or Horizontal Cylinder Engines. Hoisting Machinery for
Mines, Blast Furnaces, Inclined Planes, Portable Hoisting Machines.

Hydraulic and Steam Power Passenger and Freight Elevators.

Safety—Speed—Smooth Action.

All Kinds of HOISTING MACHINERY a Specialty.

Works and Office, 30th and Chestnut Sts., Philadelphia.
New York Office, 95 and 97 Liberty St., New York.

—ESTABLISHED

1774.—

FLOURING



MILLS.

BUHRS 1774.

ROLLS 1862.

This Company owns and operates three Mills, as follows:

Patapsco Mill A, Ellicott City, Md. Patapsco Mill B, Baltimore, Md.

Patapsco Mill C, Orange Grove, Md.

—Having a daily capacity of 1,500 barrels.—

The value of Flour depends on the proportionate quantity of Gluten, Starch, Sugar and Phosphate of Lime. Maryland and Virginia Wheat, from which our Patent Roller Flours are manufactured, is unequalled for its purity and superior quality of alible properties.

ASK YOUR GROCER FOR

Patapsco Superlative Patent. Patapsco Choice Patent. Patapsco Family. Cape Henry Family.

Patapsco Extra. North Point Family. Chesapeake Extra. Bedford Family. Orange Grove Extra

C. A. GAMBRILL MFG'G CO.

Office, 32 Commerce St., Baltimore, Md.

BUFFALO CUPOLA and FORGE BLOWERS,

PORTABLE FORGES,

Blacksmiths' Hand Blowers,

STATIONARY BLAST FORGES,

HEATING AND ANNEALING FURNACES.

Buffalo Forge Co.



—490 BROADWAY, BUFFALO, N. Y.—